

ANNUAL REPORT

OF THE

PUBLIC WORKS DEPARTMENT



OF THE

CITY OF BOSTON

1927

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1927



Public Works Department

ANNUAL REPORT
OF THE
PUBLIC WORKS DEPARTMENT
FOR THE
YEAR 1927



CITY OF BOSTON
PRINTING DEPARTMENT
1928

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ANNUAL REPORT

OF THE

PUBLIC WORKS DEPARTMENT

FOR THE

YEAR ENDING DECEMBER 31, 1927.

BOSTON, January 1, 1928.

HON. MALCOLM E. NICHOLS,
Mayor of Boston.

DEAR SIR,— In compliance with the Revised Ordinances, the annual report of the operations and expenses of the Public Works Department for the year ending December 31, 1927, is respectfully submitted. The Public Works Department, created by Ordinances 1910, chapter 9, now chapter 27 of the Revised Ordinances of 1925, was formed by consolidating the Engineering, Water and Street Departments.

ORGANIZATION.

The department is composed of six main divisions, viz.:

Central Office.— The Central Office is composed of the accounting force of the entire department under the charge of the secretary and chief clerk.

Bridge and Ferry Division.— This division, under a division engineer, has the charge and care of all bridges used as highways which are in whole, or in part, under

the control of the city; the care and management of the ferries owned by the city, including boats, slips, drops and buildings.

NOTE.—The Boston and Cambridge Division, so called, is not, strictly speaking, a division of the Public Works Department, as this work is in charge of a commission of two, one member appointed by the Mayor of Boston and the other by the Mayor of Cambridge, under the provisions of chapter 412 of the Acts of 1904; but because of the fact that the present Commissioner of Public Works is the Boston member of this commission and also because one half of the expense of this commission is defrayed by the Bridge Service, it is in this report treated as a division of this department.

Highway Division.—This division, under a division engineer, has the care of the construction, reconstruction and maintenance of roadways and sidewalks, and the care of lamps and the lighting of streets, parks and alleys.

Sanitary Division.—This division, under a division engineer, has charge of the collection and removal of ashes, garbage and refuse, street cleaning and the oiling and flushing of streets.

Sewer Division.—This division, under a division engineer, has charge of the construction of sewers, catch-basins and waterways.

Water Division.—This division, under a division engineer, has the care of water pipes, installation of meters, water service, laying and relaying of water mains and the high pressure fire service.

GENERAL.

The more important works undertaken during the past year in the Bridge Service were the rebuilding of West Newton Street Bridge over the New York, New Haven & Hartford Railroad, and the reconstruction of the spans of Broadway Bridge over the main lines of the New York, New Haven & Hartford Railroad. These two bridges were built of steel, encased in concrete, and are of a permanent type. The traffic at Broadway Bridge is also aided greatly by the elimination of the center girder.

In the Ferry Service a new electrically operated ferry bridge, with its foundations, was constructed at the North Ferry, East Boston. This new ferry bridge, like the other electrically operated ferry bridges, has a road-

way wide enough to provide for two lines of vehicles and also is strong enough to carry heavy trucking.

As noted in the reports for some years past, Congress Street Bridge is in very bad condition and should be rebuilt at once. Chapter 157 of the Acts of 1926 authorized borrowing \$800,000 outside the debt limit for this work, and the act has been accepted by the city.

The pile approaches to the draw span of Chelsea Bridge over the north channel of Mystic river are steadily deteriorating and should be rebuilt, preferably with steel superstructure on masonry piers. The work would cost approximately \$1,500,000.

An appropriation has been made for the reconstruction of Columbus Avenue Bridge over the Boston & Albany Railroad tracks, the rebuilding of which should be completed in the summer of 1928.

In connection with the widening of Morton, Ashland and River streets the bridges on these streets should be rebuilt.

In the Ferry Service two new boats should be provided in place of the old wooden vessels which are unfit for the heavy motor traffic. The two old wooden ferry bridges should also be replaced by modern electrically operated steel bridges.

The engineering force has done some work in the way of supervising construction for other services and in giving engineering advice to other departments.

Water Division.—The continued development of areas in Dorchester, West Roxbury and Brighton has resulted in applications for 2,000 service connections which have been installed, and in the same areas about ten miles of 8-inch, 12-inch and 16-inch water mains have been laid.

The metering of service connections is practically completed. There remain now about 1,000 house service connections, existing previous to 1907, to meter. On the completion of this number, all water used will be paid for under meter rates.

The tunnel under the Boston & Albany Railroad and the Providence Division Railroad at Arlington square is completed, and there remains the laying of the 48-inch main in the tunnel and the connection with the 30-inch main in Tremont street at Arlington square.

A total of approximately ten miles of water mains have been laid, ranging in size from 8-inch to 48-inch diameter.

The General Pipe Cleaning Company of Philadelphia cleaned 80,993 linear feet of 8-inch and 12-inch water pipes in West Roxbury, resulting in an improvement to the system both for domestic and fire protection uses.

The improvement of water pressure conditions in the higher sections of Roxbury and Dorchester is of special importance and has awaited the action of the Metropolitan District Commission toward laying a 48-inch main to the Boston line. When the Metropolitan Commission completes its work, the city will continue it to connect with the 36-inch high service main in Geneva avenue at Columbia road.

Sewer Division.— The extensive building operations throughout the outlying sections have made demands on the Sewer Division that have taxed its activities to the extreme.

The laying out of new streets by the Board of Street Commissioners and innumerable petitions for sanitary sewers and surface drains created an enormous amount of work in the preparation of plans, specifications, etc. As a result 18 miles of sewers and 577 catch-basins were constructed. All sections of the city received attention as far as possible. A number of petitions, however, will have to await further appropriation.

A section of Stony brook has been completed, between Tollgate way and Bradeen street, and a contract has been awarded for the construction of the Porter street outlet in East Boston. The pumping station is under consideration, the pumping units receiving special attention to determine the advisability of installing two electrically operated pumps for the present steam pumps.

Sanitary Division.— Important additions to the equipment of the Sanitary Division have been made by the purchase of several Springfield pick-up sweepers, tractors, etc.

During the early winter the snow storms were handled with speed, the streets being opened and the snow removed with the least inconvenience to the merchants and citizens.

Six city pressure flushers and six contract flushers were employed flushing the streets,— a very satisfactory and efficient method of street cleaning. Formerly their activities were restricted to the down-town streets, but during the past year, the outlying districts have been given the benefit of the flushers.

The disposal of ashes and garbage is always a subject for debate, but as the Coleman Disposal Company's contract has four years to run, the discussion relates to the contract districts. The garbage disposal in the outside districts is not as serious as the ash and rubbish disposal. Dumping areas are becoming scarce, so much so that in a few years transportation outside the city limits will be required for this waste. This waste is increasing annually; the opportunity for disposal within the city limits is becoming less, consequently a new method will have to be considered.

Highway Division.— Forty-one streets were laid out by the Board of Street Commissioners, under chapter 393 of the Acts of 1906, and under the authority of special acts the following streets were completed:

Dock square.
Kneeland street.

The appropriation for the repair and reconstruction of streets provided for the reconstruction of the following streets:

East Boston.

Lexington street, Meridian street to Shelby street.

Charlestown.

Alford street, Main street to Malden Bridge.

Medford street, Chelsea street to Main street.

City Proper.

Washington street, Dover street to Massachusetts avenue.

Brattle street and Cornhill.

Washington street, from near Brattle street to near Cornhill.

Boylston street, Berkeley street to Exeter street.

Columbus avenue, Dartmouth street to Northampton street.

Dundee street, Massachusetts avenue to Dalton street.

Longwood avenue, Brookline avenue to the Riverway.

Stuart street, Huntington avenue to Dartmouth street.

West Brookline street, Warren avenue to Shawmut avenue.

Brookline avenue, Fenway to Brookline line.

Arlington street, Columbus avenue to Piedmont street.

Beacon street, Massachusetts avenue to Raleigh street.

Boylston street, Tremont street across Charles street.

Broadway, Park square across Stuart street.

Church street, Columbus avenue to Stuart street.

Park square, Boylston street to Columbus avenue.

Stuart street, Broadway to Columbus avenue.

East Brookline street, Washington street to Albany street.

James street.

South Boston.

A street, Congress street to Dorchester avenue.

East Broadway, L street to Farragut road.

Ralston street, Dorchester avenue to Boston street.

Roxbury.

Dudley street, Harrison avenue to Blue Hill avenue.

Harrison avenue, East Lenox street to Warren street, and from Northampton street to East Lenox street.

Longwood avenue, Parker street across St. Alphonsus street.

Crawford street, Warren street to Walnut avenue.

Harold street, Walnut avenue to Seaver street.

Quincy street, Warren street to beyond Barry street.

Dorchester.

Freeport street.

West Roxbury.

Eliot street, Centre street to Pond street.

Under the appropriation allowed for granolithic sidewalks, large areas of sidewalks were laid in Brighton, Roxbury, Dorchester and West Roxbury.

In addition to the regular maintenance appropriations of the Highway Division, special appropriations, as follows, were made available during the year:

Granolithic sidewalks, \$50,000.

Reconstructing and repairing streets by contract, \$250,000.

Street signs, \$25,000.

Lighting Service.— Six hundred and fifty-three lamps of various types were installed and 151 lamps discon-

tinued during the year. At the close of business December 31 there were in operation 6,093 arc lamps, 5,532 incandescent lamps, 9,878 single mantle gas lamps and 165 single mantle fire alarm gas lamps.

APPROPRIATIONS.

The money assigned for the maintenance work of the Public Works Department during the year 1927 was derived from the income of the city raised by taxation. In December, 1926, the department estimates were submitted to the Mayor, in segregated form, who made such allowance for each item in the budget as he considered necessary and submitted them to the City Council. The total maintenance appropriations as passed by the City Council and approved by the Mayor are shown below. On another page will be found the total expenditures by each service for each item in the segregated budget:

Central Office	.	.	.	.	.	.	\$88,097	55
Bridge Service	.	.	.	.	.	.	474,651	81
Ferry Service	.	.	.	.	.	.	547,038	06
Lighting Service	.	.	.	.	.	.	974,597	54
Paving Service	.	.	.	.	.	.	1,860,678	74
Sanitary Service	.	.	.	.	.	.	3,197,491	43
Sewer Service	.	.	.	.	.	.	698,720	43
Water Service	.	.	.	.	.	.	1,547,778	84
Total	.	.	.	.	.	.	\$9,389,054	40

Yours respectfully,

JAMES H. SULLIVAN,
Commissioner of Public Works.

**Expenditures Under the Maintenance Appropriation of the
From January 1, 1927,**

GROUP AND ITEM.	Central.	Bridge.	Ferry.
A. PERSONAL SERVICE AS PER SCHEDULE A:			
1. Permanent employees.....	\$81,310 59	\$343,257 25	\$344,983 59
2. Temporary employees.....		17,230 20	21,564 65
3. Unassigned.....		8,086 66	8,130 34
B. SERVICE OTHER THAN PERSONAL:			
1. Printing and binding.....			210 50
3. Advertising and posting.....		22 95	87 48
4. Transportation of persons.....		577 88	127 26
5. Cartage and freight.....		4 54	282 42
6. Hire of teams and auto trucks.....			2,746 00
8. Light, heat and power.....		9,871 45	8,832 29
10. Rent, taxes and water.....		336 85	131 00
12. Bond and insurance premiums.....	5 00		91 00
13. Communication.....	37 00	311 58	269 30
14. Motor vehicle repairs and care.....	224 66	1,575 52	
15. Motorless vehicle repairs.....			134 65
16. Care of animals.....			
18. Cleaning.....		14 80	36 00
19. Removal of ashes, dirt and garbage.....			
20. Disposal of ashes, dirt and garbage.....			
21. Removal of snow.....			
28. Expert.....	75 00		
35. Fees, service of venires, etc.....	15 00	81 00	112 00
37. Photographic and blueprinting.....	192 50	1 20	
39. General plant.....	119 02	34,431 00	68,283 68
42. Repairing streets, etc.....			
C. EQUIPMENT:			
2. Machinery.....			
3. Electrical.....			
4. Motor vehicles.....	2,626 80	6,603 40	
5. Motorless vehicles.....			
6. Stable.....			
7. Furniture and fittings.....		47 86	69 08
9. Office.....	98 00	87 08	

Several Services by Items of the Segregated Budget.
to December 31, 1927.

Lighting.	Paving.	Sanitary.	Sewer.	Water.	Totals.
85,812 75	\$1,052,429 37	\$1,729,951 26	\$396,161 34	\$901,450 18	\$4,855,356 33
.....	56,272 48	74,785 48	10,138 00	1,729 30	181,720 11
.....	62,857 84	146,748 32	19,972 90	32,112 82	277,908 88
.....		440 00	109 30	99 75	859 55
.....	56 85	60 00	9 50	55 50	292 28
25 00	1,233 86	110 20	1,605 56	8,385 12	12,064 78
.....	21 44	58 46	23 06	29 38	419 30
.....	54,256 48	94,174 40	511 11	25 00	151,712 99
937,822 54	2,114 47	4,872 19	48,780 02	5,178 73	1,017,471 69
.....	2,775 00	2,130 00	1,240 32	722 41	7,335 58
.....	12 00	3 00	.....	50 00	161 00
.....	2,065 99	1,607 14	801 66	2,094 81	7,187 48
51 84	25,832 84	37,896 20	6,192 60	17,292 11	89,065 77
.....	962 35	21,442 03	179 80	13 25	22,732 08
.....	4,264 30	6,189 00	178 00	519 62	11,150 92
.....	178 20	307 41	53,592 69	67 65	54,196 75
.....		410,823 36	.....	.....	410,823 36
.....	75 95	356,697 30	268 25	123 25	357,164 75
.....	217,078 64	.....	.....	.....	217,078 64
.....	120 00	.....	91 00	1,576 90	1,862 90
10 00	964 00	947 00	328 30	1,354 00	3,811 30
.....		.....	72 50	.....	266 20
4,973 29	11,380 37	36,734 17	30,025 74	43,645 01	229,592 28
.....	13,615 63	.....	2,391 74	67,249 12	83,256 49
.....	6,950 00	.....	.....	.....	6,950 00
.....		.....	.....	467 61	467 61
770 11	22,906 55	19,587 26	34,691 52	21,982 01	109,167 65
.....		2,339 83	.....	.....	2,339 83
.....	120 60	1,010 07	96 42	28 44	1,255 53
.....	30 00	42 00	.....	11 75	200 60
.....		77 22	.....	430 04	692 34

**Expenditures Under the Maintenance Appropriation of the
From January 1, 1927,**

GROUP AND ITEM.	Central.	Bridge.	Ferry.
C. EQUIPMENT:			
11. Marine.....	.....	.....	\$736 08
13. Tools and instruments.....	\$2,105.52	.....	2,331 14
14. Live stock.....	.....	.....	.....
16. Wearing apparel.....	60 91	.....	216 73
17. General plant.....	783 13	.....	414 28
D. SUPPLIES:			
1. Office.....	\$3,249 98	1,129 48	1,228 84
2. Food and ice.....	.....	83 24	73 80
3. Fuel.....	.....	3,363 04	68,248 42
4. Forage and animal.....	.....	.....	.....
5. Medical, surgical, laboratory.....	.....	.....	.....
8. Laundry, cleaning, toilet.....	1 70	235 74	314 21
11. Motor vehicle.....	258 81	1,294 91	.....
13. Chemicals and disinfectants.....	.....	8 12	193 76
16. General plant.....	.....	1,014 14	3,417 59
E. MATERIALS:			
1. Building.....	.....	120 06	824 55
2. Highway.....	.....	.....	.....
3. Bridges.....	.....	30,837 79	.....
4. Ferries.....	.....	.....	9,695 27
5. Sewer.....	.....	.....	.....
6. Water.....	.....	.....	.....
9. Machinery.....	.....	387 10	.....
10. Electrical.....	.....	952 94	1,211 65
13. General plant.....	.....	20 57	.....
F. SPECIAL ITEMS:			
2. Damages.....	.....	.....	.....
7. Pensions and annuities.....	.....	4,260 76	6,103 53
11. Workingmen's compensation.....	.....	214 28	1,227 72
Total.....	\$88,214 06	\$469,412 95	\$552,328 81

Several Services by Items of the Segregated Budget.—Concluded.
to December 31, 1927.

Lighting.	Paving.	Sanitary.	Sewer.	Water.	Totals.
					\$736 08
	\$17,560 93	\$11,139 46	\$2,335 95	\$55,034 37	90,507 37
		3,500 00			3,500 00
	4 60	95 65	983 70	264 10	1,625 69
\$3,878 00	673 64	1,657 03	3,316 29	288 40	11,010 77
186 42	5,545 77	4,157 20	1,927 71	9,614 61	27,040 01
	227 92	157 25	60 75	59 78	662 74
	13,201 30	3,379 70	50,652 11	1,774 98	140,619 55
	12,152 59	69,159 01	964 76	2,654 99	84,931 35
			11 17		11 17
	116 26	41 31	208 91	173 08	1,091 21
112 87	16,785 67	46,239 93	3,474 53	7,466 37	75,633 09
	275 00	176 47	118 14	116 71	888 20
	4,801 97	962 06	2,244 14	6,521 69	18,961 59
	2,605 37	39 68	1,878 13	79 24	5,547 03
	205,889 44	28,091 27			233,980 71
					30,837 79
					9,695 27
			10,168 37		10,168 37
				246,943 28	246,943 28
					387 10
	122 17	193 72	438 14	958 06	3,876 68
	20,590 76	53,216 12	6,187 81	3,005 05	83,020 31
				21,542 60	21,542 60
	17,177 92	15,879 65	4,531 02	15,277 61	63,230 49
	3,907 28	15,409 71	2,818 43	4,477 05	28,054 47
\$953,642 82	\$1,860,155 10	\$3,202,528 52	\$699,708 79	\$1,483,018 23	\$9,309,009 28

**Expenditures Under the Maintenance Appropriation of the
From January 1, 1927,**

GROUP AND ITEM.	Central.	Bridge.	Ferry.
Commissioner.....	\$9,000 00	.....	.....
Division engineers.....	\$3,750 00	\$1,250 00
Engineers in charge.....
Clerks and stenographers.....	59,075 05	3,703 47	1,500 00
Address printers.....
Blueprinters.....	3,335 87	.....	.....
Chauffeurs.....	1,699 67	6,442 00	385 00
Cement testers.....	5,200 00	.....	.....
Chief inspectors.....
Chemist and assistant.....
Cashiers.....	2,157 94
Constables.....
Captains.....	29,874 73
Deckhands.....	41,503 13
Drawtenders.....	231,181 77	.....
Draughtsman.....	8,016 51	.....
Engineers, assistants, civil.....	17,540 46	29,218 50
Engineers (steam).....
Electricians.....	1,982 10	1,852 10
Emergencymen.....
Foremen, general.....	3,258 15
Foremen.....	2,258 05	.....
Subforemen.....	5,593 02	.....
Gatemen (ferry).....	25,890 70
Instrumentmen.....	5,043 91	.....
Rodmen.....	655 41	.....
Inspectors.....	4,192 30	.....
Inspector, property.....	3,000 00	.....	.....
Laborers, janitors, teamsters, watchman, stablemen, etc.	19,262 17	30,699 94
Mechanics.....	30,177 75	40,055 62
Meter readers.....
Medical inspectors.....	200 00	100 00
Oilers and firemen.....	89,626 76
Quartermasters.....	23,584 63
Sewer gatemen, cleaners, etc.....

Several Services by Items of the Segregated Budget.
to December 31, 1927.

Lighting.	Paving.	Sanitary.	Sewer.	Water.	Totals.
					\$9,000 00
\$1,250 00	\$3,750 00	\$5,000 00	\$5,000 00	\$5,000 00	25,000 00
	800 00			3,675 00	4,475 00
2,704 42	33,952 44	5,213 31	7,371 23	90,079 60	203,599 52
				1,300 00	1,300 00
					3,335 87
	17,495 72	125,003 23	11,391 00	22,801 29	185,217 91
					5,200 00
	1,072 26				1,072 26
	1,100 00				1,100 00
				2,216 67	4,374 61
	2,239 15				2,239 15
					29,874 73
					41,503 13
					231,181 77
	2,103 12		5,729 51	4,200 00	20,049 14
	9,626 18	1,568 19	10,957 50	10,490 64	79,401 56
	18,656 25		12,840 32	1,721 50	33,218 07
			3,964 20		7,798 40
				32,091 66	32,091 66
	3,000 00		7,030 60		13,288 75
	22,958 57	48,525 36		27,464 48	101,206 46
	35,222 05			1,900 00	42,715 07
					25,890 70
	8,158 54		16,304 64	9,780 84	39,287 93
	1,337 30		7 67		2,000 38
1,858 33	45,571 39	143,646 24	40,545 88	52,412 39	288,226 53
					3,000 00
	622,775 07	1,300,109 67	133,351 11	247,834 80	2,354,032 76
	200,476 44	75,845 58	40,037 99	312,384 93	698,978 31
				56,976 72	56,976 72
	400 00	2,200 00	100 00	600 00	3,600 00
	7,977 00		62,185 00	1,716 00	161,504 76
					23,584 63
			32,634 38		32,634 38

**Expenditures Under the Maintenance Appropriation of the
From January 1, 1927,**

GROUP AND ITEM.	Central.	Bridge.	Ferry.
Supervisors.....	\$3,258 33	.....
Supervisor, deputy.....
Storekeepers.....	\$1,657 89
Superintendent and deputy.....
Telephone operators.....
Tollmen.....	22,368 50
Veterinarian.....
Wharfingers.....
Weighers.....
Yardmasters.....
Yardmen.....
Permanent (Totals).....	\$81,310 59	\$343,257 25	\$344,983 59
Temporary.....	17,230 20	21,564 65
Unassigned.....	8,086 66	8,130 34
Totals.....	\$81,310 59	\$368,574 11	\$374,678 58

Several Services by Items of the Segregated Budget.—Concluded.
to December 31, 1927.

Lighting.	Paving.	Sanitary.	Sewer.	Water.	Totals.
.....	\$2,700 00	\$4,000 00	.....	\$2,058 04	\$12,016 37
.....		3,500 00	.....		3,500 00
.....		1,657 89	.....	1,900 00	5,215 78
.....	2,500 00	.....	\$3,415 90	6,358 33	12,274 23
.....		1,400 00	.....	1,304 17	2,704 17
.....		.....	.....	.....	22,368 50
.....	500 00	2,250 00	125 00	125 00	3,000 00
.....		3,516 01	.....	.....	3,516 01
.....	1,657 89	1,657 89	.....	.....	3,315 78
.....		1,657 89	.....	1,858 12	3,516 01
.....	6,400 00	3,200 00	3,169 32	3,200 00	15,969 32
\$5,812 75	\$1,052,429 37	\$1,729,951 26	\$396,161 34	\$901,450 18	\$4,855,356 33
.....	56,272 48	74,785 48	10,138 00	1,729 30	181,720 11
.....	62,857 84	146,748 32	19,972 90	32,112 82	277,908 88
\$5,812 75	\$1,171,559 69	\$1,951,485 06	\$426,272 24	\$935,292 30	\$5,314,985 32

The expenditures under the several appropriations for the different services for the year 1927 were as follows:

DIVISIONS AND SERVICES.	Current Expenses.	Special Appropriations.	Total Expenditures.	Balance December 31, 1927.
Central Office.....	\$88,214 06	.....	\$88,214 06	.....
Bridge Service.....	469,412 95	\$236,667 76	706,080 71	¹ \$214,012 78
Ferry Service.....	552,328 81	154,084 85	706,413 66	² 238,959 16
Lighting Service.....	953,642 82	.....	953,642 82	.....
Paving Service.....	1,860,155 10	1,836,700 79	3,696,855 89	152,195 46
Sanitary Service.....	3,202,528 52	42,330 00	3,244,858 52	2,464 84
Sewer Service.....	699,708 79	973,960 36	1,673,669 15	³ 1,080,670 28
Water Service.....	1,483,018 23	369,855 96	1,852,874 19	189,273 09
Totals.....	\$9,309,009 28	\$3,613,599 72	\$12,922,609 00	\$1,877,575 61

¹ Authorized, but not issued, \$85,000.

² Authorized, but not issued, \$50,000.

³ Authorized, but not issued, \$750,000.

Cost of Maintenance of the Public Works Department Since 1918.

DIVISION AND SERVICES.	1919-20.	1920-21.	1921-22.	Special Account 1921-22.	1922-23.	1923-24.	1924-25.	1925. (11 months.)	1926.	1927.
Central Office.....	\$79,009 15	\$91,373 98	\$88,308 02	\$3,072 64	\$100,457 23	\$84,717 60	\$86,511 11	\$81,432 27	\$89,009 05	\$88,214 06
Bridge Service.....	363,130 05	410,216 53	392,589 05	15,805 42	382,413 98	387,220 23	426,330 81	396,596 57	445,564 07	452,916 60
Boston and Cambridge Bridges.	26,390 52	26,783 42	27,999 77	2,433 95	27,669 10	30,832 74	31,740 49	19,309 12	18,983 08	16,496 35
Ferry Service.....	436,687 75	574,751 54	496,836 35	21,483 31	497,091 70	498,684 78	523,527 46	472,240 69	516,316 65	552,325 81
Lighting Service.....	714,821 55	722,134 24	722,091 55	134,127 03	734,059 09	747,191 63	830,736 90	820,768 34	927,329 94	953,642 82
Paving Service.....	1,063,059 16	1,023,332 59	1,110,496 07	34,869 68	925,828 45	1,140,959 74	1,208,503 43	1,240,788 13	2,222,030 79	1,396,279 48
Removal of Snow.....	78,802 12	663,111 55	215,399 21	6,611 10	416,720 51	364,713 64	349,375 57	75,494 95	1,234,123 87	786,521 98
Sanitary Service.....	* 1,265,581 65	1,508,102 71	11,629,078 98	105,288 95	1,831,685 38	1,895,984 45	4,273,913 32	1,877,228 67	2,030,603 65	2,089,907 75
Sewer Service.....	472,713 49	616,461 55	607,043 15	25,419 60	567,758 00	605,796 63	635,928 74	592,155 15	688,876 44	699,708 79
Street Cleaning Service.....	607,992 26	700,031 01	640,179 28	23,637 66	627,203 22	607,583 55	592,645 85	719,296 18	696,834 10	740,599 35
Street Watering and Oiling Service.	118,014 00	186,763 20	145,454 29	491 24	122,865 88	108,842 33	79,476 90	53,420 88	51,458 88	49,375 06
Water Service.....	1,010,634 32	1,253,166 33	1,232,418 76	41,656 57	1,354,555 93	1,229,573 73	1,608,320 10	1,300,163 72	1,511,407 58	1,483,018 23
Totals.....	\$6,237,742 02	\$7,776,231 65	\$7,307,894 48	\$414,896 05	\$7,588,317 47	\$7,702,101 05	\$8,447,000 68	\$7,657,894 67	\$9,382,538 10	\$9,309,000 28

* Includes \$71,000 paid by Street Cleaning and Oiling Service.

† Includes \$12,455.71 paid by Street Cleaning and Oiling Service.

‡ Includes \$142,724.96 paid by Street Cleaning and Oiling Service.

REVENUES, 1927.

On Account of the Public Works Department, as Per Auditor's Statement.

Bridge Service General Revenue:

Third Payment Chelsea Bridge			
South	25,000	00	
Chelsea Bridge North (Revere)	1,595	44	
Labor and material	9,694	75	
Junk	15	00	
Rent	200	00	
			\$36,505 19

Chelsea Bridge South (Sinking Fund):

From City of Chelsea	68,178	90
Charlestown Bridge (Sinking Fund):		

Rents	2,627	65
Broadway Bridge, South Boston (Sinking Fund):		

From Boston Elevated Railway	4,000	00
Ferry Service General Revenue:		

Tolls	73,308	13
Headhouse privileges	300	00
Rents	589	50
Cleaning	48	00
Telephone	92	04
Sale of pontoon	50	00
Sale of ferryboats	14,835	70
Free ferries July 4	1	00
Junk	18	00
	89,242	37

Lighting Service General Revenue:

Lighting bridges	1,462	37
Damage to posts	718	00
Sale of junk	8	87
	2,189	24

Paving Service General Revenue:

Assessments	26,841	29
Permits	26,681	83
Labor and material	2,630	33
Inspectors	108	00
Damage to auto	200	40
Damage to signs	63	46
Gasolene	8	05
Constructing driveway	109	26
Use of roller	10	00
Sale of roller	200	00
<i>Carried forward</i>	\$56,852	62
	\$202,743	35

<i>Brought foward</i>		\$56,852 62	\$202,743 35
Labor and material (chapter 28, Revised Ordinances, 1914)		3,135 50	
Rebate auto registration		23 00	
Sale of material		3,217 77	
Forfeiture on contract		1,500 00	
Sale of horses		10 00	
Artificial sidewalks		261 80	
Rent of sign		90 00	
Penalty, oil and coal		43 80	
Rents		200 00	
			65,334 49
Reconstructing and Repairing Streets by Contract:			
Forfeiture on Contract (Appropriation)			600 00
Sewer Service General Revenue:			
Entrance fees		\$10,662 48	
Labor and material		1,108 85	
Disposal of sewage		10,300 00	
Old material		178 19	
Penalty on oil		1,813 56	
Penalty on coal		33	
Old sewer, West Roxbury		72 85	
Rents		260 00	
			24,396 26
Sanitary Service General Revenue:			
Collection of waste		\$95,182 95	
Sale of manure		2,138 78	
Sale old material		4 00	
Damage to wagon		12 00	
Penalty on coal		1 39	
Rents, Fort Hill Wharf		525 75	
			97,864 87
Sewerage Works (Exclusive of Assessments) Appropriation:			
Inspector's services		\$379 16	
Labor and materials		649 18	
			1,028 34
Water Service General Revenue:			
Water rates		\$3,913,117 06	
Fees		7,157 13	
Off and on		2,734 00	
Labor and material		3,086 14	
Sale of material		7,755 85	
Meter tests		288 75	
Service pipes		106,981 97	
Interest		2,321 65	
Fire pipes		31,491 29	
<i>Carried foward</i>		\$4,074,933 84	\$391,967 31

<i>Brought forward</i>	.	.	.	\$4,074,933	84	\$391,967	31
Board of horse	.	.	.	546	00		
Damage to hydrants	.	.	.	1,364	69		
Carrying water	.	.	.	139	49		
Relocating pipes	.	.	.	7	29		
Pick holes	.	.	.	287	18		
Relocating hydrants	.	.	.	1,735	66		
Thawing pipes	.	.	.	13	85		
Penalty on coal	.	.	.	20			
Repair service pipes, gates, etc.	.	.	.	69	69		
Install fire pipes	.	.	.	33	34		
Rents	.	.	.	100	00		
Accrued interest on loans ne- gotiated	.	.	.	447	22		
						4,079,678	45
Total	.	.	.	.	.	\$4,471,645	76

HIGHWAY DIVISION.
Miscellaneous.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Contract Estimated.	Amount Expended in 1927.
3 Dump stick on seawall, Dorchester avenue, from Congress street to Sumner street, city proper.	The Rendle Corporation.....	Feb. 1, 1927.	Completed Feb. 28, 1927....	\$910 00	\$928 72
3 Removing portion of buildings, Nos. 1 to 9 Kneeland street, city proper.	City Building Wrecking Company.	April 20, 1927.	Completed August 26, 1927.	1,495 00	1,495 00
2 Resetting curbing and replacing artificial walks on Trinity place and Dartmouth street, city proper.	Henry F. Malley.....	May 12, 1927.	Completed June 4, 1927....	898 40	935 97
1 Fence, filling and slope paving in Marginal street, East Boston.	E. J. McHugh & Son	June 21, 1927.	Completed Sept. 21, 1927....	2,760 00	3,581 07
1 Grading in Ashland street, from Wood avenue to Wilnott street, and Oakland street, from Orlando street to Hebron street, Dorchester.	William J. Barry.....	July 26, 1927.	Unfinished.....	15,750 00	14,853 75
2 Electrical installation at Highland Street Yard.....	Stanton Electric Company.....	Sept. 20, 1927.	Completed Sept. 26, 1927....	2,090 00	1,776 50
1 Grading in Morton street, from Druid street to Washington street, Dorchester.	C. Capone.....	Nov. 21, 1927..	Unfinished.....	9,500 00	Nothing.
1 Setting edgestones in Pilgrim road, from Brookline avenue to Short street, Roxbury.	Maplewood Construction Company.	Nov. 30, 1927.	Unfinished.....	1,359 60	500 00
2 Resetting edgestones, paving, granolithic sidewalks, etc., in Cross street, city proper.	C. M. Callahan, Inc.	June 14, 1927.	Completed June 20, 1927....	500 00	500 00
Electrical work, City Yard, Charlestown.....	Bunker Hill Electric Company,	May 18, 1927.	Completed May 18, 1927....	190 00	190 00

¹ Advertised and awarded to the lowest bidder.

² Unadvertised; only bidder.

³ Invitation bids; unadvertised; awarded to the lowest bidder.

BRIDGE AND FERRY DIVISION (BRIDGE SERVICE).

Bridge Work.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Contract Estimated.	Amount Expended in 1927.
1 Rebuilding West Newton Street Bridge, over the New York, New Haven & Hartford Railroad, Boston.	A. G. Tomasello & Son, Inc. . . .	Jan. 21, 1927.	Completed June 9, 1927. . . .	\$34,135 00	\$34,850 96
2 Repairing running mechanism of draw span of Chelsea Bridge of North Channel of Mystic river.	Boston Bridge Works, Inc. . . .	Feb. 23, 1927.	Completed Feb. 23, 1927. . . .	2,000 00	1,932 79
1 Rebuilding spans 11 and 12 of Broadway Bridge, over the New York, New Haven & Hartford Railroad, Boston.	Boston Bridge Works, Inc. . . .	Feb. 26, 1927.	Completed Oct. 10, 1927. . . .	69,628 00	68,574 20
2 Repairing counterweight link and pins; adjusting shear lock, etc., of Chelsea Bridge, over South Channel of Mystic river.	Boston Bridge Works, Inc. . . .	March 11, 1927.	Completed March 14, 1927. . . .	1,500 00	1,939 12
1 Repairing draw fender pier, Chelsea Bridge North.. . .	The Rendle Corporation.	April 4, 1927.	Completed June 14, 1927.	5,177 50	4,765 44
1 Repairing Summer Street Bridge draw and fender piers.	The Rendle Corporation.	May 25, 1927.	Completed July 2, 1927.	3,100 00	3,906 02
1 Pointing masonry piers of Charlestown Bridge.	M. M. Devine.	June 10, 1927.	Completed Sept. 24, 1927.	7,349 50	9,000 83
1 Repaving draw span of Chelsea Bridge North.	M. M. Devine.	June 24, 1927.	Completed Aug. 20, 1927.	9,465 50	9,708 65
1 Painting Northern Avenue Bridge.	M. M. Devine.	July 1, 1927.	Completed Sept. 30, 1927.	7,300 00	7,300 00
1 Repairing draw fender pier of Chelsea Bridge North, Repaving draw fender pier of Northern Avenue Bridge.	The Rendle Corporation. W. H. Ellis & Son Company.	Aug. 9, 1927. Aug. 11, 1927.	Completed Oct. 6, 1927. Completed Sept. 20, 1927.	8,105 60	10,984 01
1 Repairing Meridian Street Bridge.	The Rendle Corporation.	Sept. 13, 1927.	Completed Nov. 22, 1927.	8,912 00	8,679 28
1 Repairing sidewalk and flooring of Dorchester Avenue Bridge, over Fort Point Channel.	M. M. Devine.	Nov. 3, 1927.	Unfinished.	6,952 50	2,396 38
2 Repairing turning mechanism of Northern Avenue Draw Bridge.	Boston Bridge Works, Inc.	Dec. 15, 1927.	Unfinished.	3,000 00	2,939 21

¹ Advertised and awarded to the lowest bidder.² Unadvertised; only bidder.

CONTRACTS MADE BY PUBLIC WORKS DEPARTMENT FROM JANUARY 1, 1927, TO DECEMBER 31, 1927.

Hired Teams.

District.	Awarded to	Dated.	Doubles per Day.	Singles per Day.	Trucks, per Day.	Paving Service.	Sanitary Service.	Sewer Service.	Street Cleaning and Oilng Service.	Total.
¹ No. 1, South Boston and Dorchester North,	Edward J. Byrne.....	Jan. 21, 1927	\$7 70	\$23 00	\$10,110 25	.....	.....	.....	.....	\$10,110 25
¹ No. 2, East Boston and Breed's Island.....	E. J. McHugh & Son.....	Jan. 27, 1927	8 00	5 00	23 00	2,111 00	.....	.....	.....	2,111 00
¹ No. 3, Charlestown.....	E. J. McHugh & Son.....	Jan. 27, 1927	8 00	5 00	23 00	1,402 75	\$292 00	.....	\$246 00	1,940 75
¹ No. 4, Brighton.....	Bernard Malone.....	Jan. 27, 1927	8 00	6 00	23 00	603 75	.....	.....	.....	603 75
¹ No. 5, West Roxbury.....	W. F. Cuddy.....	Jan. 27, 1927	5 00	2 00	23 00	7,670 00	.....	.....	.....	7,670 00
¹ No. 6-9, Dorchester and Ashmont.....	Charles Loonie.....	Jan. 27, 1927	5 50	4 00	23 00	6,819 50	.....	.....	\$299 00	3,565 00
¹ No. 7, Roxbury South and Jamaica Plain,	M. Doyle & Co.....	Jan. 27, 1927	4 48	2 00	23 00	3,162 50	.....	.....	.....	3,162 50
¹ No. 8, South End and Roxbury North.....	M. H. Loonie Construction Company, Inc.	Jan. 27, 1927	6 50	5 75	23 00	17,113 02	.....	90 11	.....	17,203 13
² No. 10, North and West Ends and Back Bay,	B. E. Grant Company.....	Jan. 21, 1927	7 25	7 00	23 00	1,856 00	25,810 40	.....	.....	27,666 40
¹ No. 11, Hyde Park.....	T. H. Corrigan & Sons...	Feb. 1, 1927	9 00	6 00	23 00	235 13	.....	.....	.....	235 13

¹ Advertised and awarded to the lowest bidder.

² Advertised and awarded to the second bidder.

SANITARY DIVISION (SANITARY SERVICE).

Collecting and Removing Ashes, Store Dirt, House Dirt, Refuse and Garbage.

DISTRICT.	Awarded to	Dated.	Progress of Work.	Bid Per Month.	Amount Expended in 1927.
1 East Boston.....	John J. Ward Company.....	Dec. 6, 1926.	Completed Dec. 31, 1927....	\$4,228 78	\$50,745 36
1 Brighton.....	Joseph P. McCabe,.....	Dec. 6, 1926.	Completed Dec. 31, 1927....	6,290 00	75,480 00
2 West Roxbury.....	John J. Moore.....	Dec. 6, 1926.	Completed Dec. 31, 1927....	3,991 50	47,898 00
1 Dorchester.....	D. M. Biggs & Co.	Dec. 6, 1926.	Completed Dec. 31, 1927....	18,800 00	225,600 00
1 Hyde Park.....	Thomas E. Bryan.....	Dec. 6, 1926.	Completed Dec. 31, 1927....	925 00	11,100 00

¹ Advertised and awarded to the second bidder.² Advertised and awarded to the third bidder.

Contract in Force Made in Previous Years.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Bid Per Year.	Amount Expended in 1927.
1 Disposal of garbage and refuse for ten years, from July 1, 1922, to July, 1932.	Coleman Brothers, Inc.	Dec. 31, 1921.	Unfinished.....	\$345,000 00	\$345,000 00

¹ Advertised and awarded to the lowest bidder.

SANITARY DIVISION (SANITARY SERVICE).
Miscellaneous.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1927.
² Removing manure from the stables and yards in the various divisions of the department.	Joseph A. Kelley.....	Dec. 17, 1927.	Completed Dec. 31, 1927...	* \$7 25	
⁴ Furnishing combination motor street sprinkling and flushing trucks.	B. E. Grant Company.....	June 7, 1927.	Completed Oct. 31, 1927...	† 34 00	\$59,160 00
¹ Repairing garbage dump at Fort Hill Wharf.....	Walsh & Co.....	July 8, 1927.	Completed Dec. 27, 1927...	10,611 00	9,944 87
¹ Repairing garbage dump at Albany Street Yard.....	Walsh & Co.....	Sept. 9, 1927.	Completed Oct. 10, 1927...	11,210 00	11,849 30
³ Repairing roof, etc., of North Grove Street Yard....	William Martin.....	Aug. 24, 1927.	Completed Sept. 30, 1927...	\$50 00	\$50 00
³ Disposal of ashes and refuse in the Charlestown district.	Coleman Disposal Company..	Feb. 26, 1927.	Completed Dec. 31, 1927...	† 900 00	9,000 00

* Per horse per year; paid to city.

¹ Advertised and awarded to the lowest bidder.

³ Unadvertised; only bidder.

² Per day.

† Per month.

⁴ Advertised and awarded to the highest bidder.

⁴ Advertised and awarded to the only bidder.

BRIDGE AND FERRY DIVISION (FERRY SERVICE).
Ferry Work.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Contract Estimated.	Amount Expended in 1927.
1 Teaming coal to ferryboats.....	E. J. McHugh & Son.....	Dec. 31, 1926.	Completed July 31, 1927.....	* \$9,75	\$1,755 00
1 Repairing hull, etc., of ferryboat "Noddle Island"	The Atlantic Works.....	Jan. 7, 1927.	Completed March 9, 1927.....	8,237 00	11,273 76
1 Repairing hull, etc., of ferryboat "Lieutenant Flaherty,"	R. T. Green Company.....	Jan. 27, 1927.	Completed March 10, 1927.....	6,920 00	4,562 63
1 Electrically operated ferry bridge, with gallows frame and accompanying machinery, North Ferry, East Boston.	J. Edward Ogden Company, Inc.	March 18, 1927.	Unfinished.....	140,500 00	113,453 75
1 Foundations for ferry bridge, North Ferry, East Boston.	W. H. Ellis & Son Company.....	March 22, 1927.	Unfinished.....	26,789 00	22,286 12
1 Repairing hull, etc., of ferryboat "Ralph J. Palumbo."	R. T. Green Company.....	April 8, 1927.	Completed May 5, 1927.....	10,103 25	\$200 40
1 Repairing bronze propeller blades.....	The Atlantic Works.....	May 6, 1927.	Completed June 3, 1927.....	930 00	930 00
1 Furnishing and installing new boilers, etc., on ferryboat "John H. Sullivan,"	Bethlehem Shipbuilding Corporation, Limited.	June 16, 1927.	Unfinished.....	28,895 00	Nothing.
1 Repairing hull, etc., of ferryboat "General Sumner"	Bethlehem Shipbuilding Corporation, Limited.	June 22, 1927.	Completed Aug. 6, 1927.....	6,800 00	9,190 00
1 Teaming coal to ferryboats.....	E. J. McHugh & Son.....	July 26, 1927.	Completed Dec. 31, 1927.....	* 7 00	924 00
1 Repairing ferryboats "Charles C. Donoghue" and "Daniel A. MacCormack."	R. T. Green Company.....	Sept. 20, 1927.	Completed Nov. 17, 1927.....	6,270 00	9,055 59
1 Repairing piers at the North and South Ferries.....	W. H. Ellis & Son Company.....	Oct. 11, 1927.	Unfinished.....	22,620 00	Nothing.
1 Repairing bronze propeller blades	The Atlantic Works.....	Nov. 15, 1927.	Completed Dec. 12, 1927.....	906 00	770 10
1 Weighing and vending machines in ferry houses.....	Autosales Corporation.....	Feb. 1, 1927.	Completed Dec. 31, 1927.....	† 400 00	400 00

¹ Advertised and awarded to the lowest bidder.

* Per day.

† Per year; paid to city.

Removing Snow and Ice.

DISTRICT	Contractor	Dated.	Progress of Work.	Price Per Cubic Yard.	Amount Expended in 1927.
District No. 1.....	J. J. McCarthy & Co.	Dec. 14, 1927.	Unfinished.....	\$0 55	Nothing.
District No. 2.....	Leo J. Nawn, Inc.	Dec. 23, 1927.	Unfinished.....	55	Nothing.
District No. 3.....	B. E. Grant Company.....	Dec. 23, 1927.	Unfinished.....	55	Nothing.
District No. 4.....	B. E. Grant Company.....	Dec. 23, 1927.	Unfinished.....	55	Nothing.
District No. 5.....	The Ormac Company.....	Dec. 14, 1927.	Unfinished.....	55	Nothing.
District No. 6.....	A. G. Tomasello & Son, Inc.	Dec. 14, 1927.	Unfinished.....	60	Nothing.
District No. 7.....	John J. Loonie.....	Dec. 23, 1927.	Unfinished.....	55	Nothing.
District No. 8.....	J. B. O'Rourke.....	Dec. 23, 1927.	Unfinished.....	50	Nothing.
District No. 9.....	J. A. Singarella.....	Dec. 14, 1927.	Unfinished.....	65	Nothing.
District No. 10.....	D. M. Biggs & Co.	Dec. 23, 1927.	Unfinished.....	50	Nothing.
District No. 11.....	Edward J. Byrne.....	Dec. 23, 1927.	Unfinished.....	58	Nothing.
District No. 12.....	A. DeStefano & Son, Inc.	Dec. 14, 1927.	Unfinished.....	54	Nothing.

¹ Invitation bids; not advertised.

HIGHWAY DIVISION (LIGHTING SERVICE).
Contract in Force Made in Previous Years.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Price Per Gas Lamp Per Year.
1 FURNISHING GAS AND FOR THE EQUIPMENT AND LIGHTING OF GAS LAMPS FOR A PERIOD OF TEN YEARS, FROM APRIL 1, 1924, TO MARCH 31, 1934, INCLUSIVE.	Boston Consolidated Gas Company	May 20, 1924.	Unfinished.....	\$11 00

¹ Advertised and awarded to the only bidder.

WATER DIVISION (WATER SERVICE).
Laying and Relaying Water Pipes.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Contract Estimated.	Amount Expended in 1927.
1 Dock square, Faneuil Hall square and Merchants row, city proper.	L. P. Federico & Co.	March 29, 1927.	Completed April 16, 1927...	\$1,468 75	\$1,203 07
1 Barlow street, Cedar road, Forest Hills street, Pond Place, Rhoda street, Walnut road, West Roxbury Parkway, West Roxbury; Church street and Hill-side street, Hyde Park, and Duxbury road, Dorchester.	John Williams.....	April 5, 1927.	Completed May 24, 1927...	4,445 00	5,118 48
1 Union street, between Hanover street and Dock square, and in Dock square, city proper.	A. Grande.....	April 15, 1927.	Completed June 6, 1927...	2,568 50	2,118 16
1 Southern Artery, between Washington street and Dorchester avenue, Dorchester.	John Williams.....	May 5, 1927.	Completed May 28, 1927...	2,353 75	2,446 35
1 Alicia road, Ormond street, Dorchester; Orange street and Sanborn avenue, West Roxbury.	N. DiBartolomeo Company.....	May 6, 1927.	Completed Aug. 1, 1927...	2,865 50	3,129 72
1 Elkins street, South Boston; Summer terrace, Upham avenue, Wilder road, Delmont street, Blakely street, Greenmount street, Dorchester; Grenville place, city proper.	L. P. Federico & Co.	May 21, 1927.	Completed June 25, 1927...	3,541 25	3,386 99
1 Southern Artery, between Dorchester avenue and Hallet street, Dorchester.	John Williams.....	May 26, 1927.	Completed Aug. 9, 1927...	14,605 00	14,699 82
1 Columbia street, Hosmer street, Norfolk terrace, Owencroft road, Dorchester; Chilton road, Hodgdon terrace, New Park avenue, Parkvale road, West Saville and Wolfe streets, West Roxbury.	M. DeSisto Company.....	May 26, 1927.	Completed Aug. 6, 1927...	4,255 00	4,562 49
1 Southern Artery and Owen street, Dorchester.....	C. Russo.....	June 4, 1927.	Completed Aug. 8, 1927...	1,203 00	1,237 52
1 Elbert street, Roxbury.....	N. DiBartolomeo Company.....	June 10, 1927.	Completed July 8, 1927....	1,752 50	1,506 50

1 Lake Shore road, Brighton; Maple and Stratford streets, Woodward road, West Roxbury, and Belvidere road, Hyde Park.	C. Struzzieri.....	June 10, 1927.	Completed July 16, 1927 . . .	2,313 25	2,391 75
1 Ashton street, Dorchester; Pleasant street, Hyde Park; Forest Hills circle, St. Joseph street and Redgate road, West Roxbury.	A. Cefalo.....	June 28, 1927.	Completed Aug. 13, 1927 . . .	1,903 75	2,078 91
1 Mason and Washington streets, St. James avenue, city proper; Rangeley, Gene, Ginita, Glide streets, Dorchester, and St. Peters street, West Roxbury.	L. P. Federico & Co.	July 13, 1927.	Completed Aug. 22, 1927 . . .	4,327 50	3,982 23
1 Beaver, Church, Cleveland streets, Durant road, Franklin street, Glenwood avenue (west), River, Roxanna streets, Shirley road, Sunnyside and Thompson streets, Hyde Park.	John Williams.....	July 18, 1927.	Completed Aug. 22, 1927 . . .	6,241 00	5,159 54
1 D street, between West Second street and Old Colony avenue, South Boston.	Joseph Capone	July 26, 1927.	Completed Oct. 22, 1927 . . .	6,455 00	3,023 68
1 Warrenton street, between Tremont and Stuart streets, city proper.	M. DeSisto Company.....	Aug. 3, 1927.	Completed Aug. 31, 1927 . . .	1,891 50	1,729 52
1 Brook road, Carroll street, Greenhill avenue, Hammatt road, Knoll street, Stella road, West Roxbury, and Hopewell road, Hyde Park.	N. DiBartolomeo Company . . .	Aug. 3, 1927.	Completed Sept. 10, 1927 . . .	2,210 00	2,143 36
1 River street, between Mattapan square and Everett square, Dorchester and Hyde Park.	John Williams.....	Aug. 4, 1927.	Completed Oct. 15, 1927 . . .	4,831 50	3,768 49
1 Adams, Butler streets, Emerson avenue, Southern Artery, Winston street, Dorchester; Metropolitan avenue, Hyde Park, and West Roxbury parkway, West Roxbury.	A. Grande	Aug. 26, 1927.	Completed Dec. 6, 1927 . . .	4,256 00	5,418 17
1 Hubbard road, Newkirk, Flavia and Wesses streets, Dorchester; Ashley street, Savview avenue, East Boston, and Zamora court, West Roxbury.	L. P. Federico & Co.	Aug. 31, 1927.	Completed Oct. 19, 1927 . . .	4,107 00	2,077 35
1 Arlington, Providence and Reservoir streets, Hyde Park, Russett road, West Roxbury; Cooman, Rockdale streets, Southern Artery and Vera street, Dorchester.	E. O'Toole Contracting Company.	Sept. 15, 1927.	Completed Dec. 22, 1927 . . .	3,443 00	27,069 65

Laying and Relaying Water Pipes.—Concluded.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Contract Estimated.	Amount Expended in 1927.
1 Adamson, Alcorn, Beechcroft, Gardner streets, Brighton; Clarence avenue, Cross road and Overlook road, West Roxbury.	A. Grande.....	Oct. 11, 1927.	Unfinished.....	\$6,481 00	\$4,085 95
Dyer avenue, Jacob, Nevada streets, Dorchester; Bobolink, Doncaster streets, Ferndale road; Florence street, Glen road, private land (between Glade and Glenside avenues), Westover street, West Roxbury; and Belvidere road, Hyde Park.	E. O'Toole Contracting Company.	Oct. 28, 1927.	Unfinished.....	4,218 50	2,912 86
1 Grayson street, Hunns road, Whitten street, Francis park, Charlemont street, Westmoreland street extension, Dorchester, and Wesley street, South Boston.	John Williams.....	Nov. 3, 1927.	Unfinished.....	4,036 00	2,264 56
1 Addington road, Greener road, Hill, Maher, Wolfe streets, West Roxbury; Fuller street, Dorchester, and Monroe road, Brighton.	C. Russo.....	Nov. 15, 1927.	Unfinished.....	3,210 00	2,204 76
1 Colwell road, Durland street, Hatherley road, Brighton, and Coleman street, Hyde Park.	John Williams.....	Dec. 7, 1927.	Unfinished.....	2,078 50	Nothing.
Southern Artery and Washington road, Dorchester.	L. P. Federico & Co.....	Dec. 9, 1927.	Unfinished.....	2,227 50	Nothing.
1 Ashland avenue, Charne avenue, Elwell road, West Roxbury Park way, West Roxbury; Rose Garden circle, Brighton; Emerson avenue, Madison avenue and Southern Artery, Dorchester.	A. DeStefano & Son, Inc.....	Dec. 14, 1927.	Unfinished.....	3,941 00	Nothing.

1 Advertised and awarded to the lowest bidder.

Miscellaneous.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Contract Estimated.	Amount Expended in 1927.
² Construction of concrete tunnel with steel pipe shafts under the New York, New Haven & Hartford Railroad and the Boston & Albany Railroad at Arlington square, city proper.	Simpson Brothers Corporation.	Feb. 1, 1927.	Completed Nov. 30, 1927...	\$100,000 00	\$87,977 83
³ Overhauling the sterling engine in the Water Division boat "Watercrest."	Walter H. Moreton Corporation.	Feb. 26, 1927.	Completed March 26, 1927,	\$800 00	\$800 00
⁴ Assembling 50 B. & F. post hydrants.....	McCulloch Manufacturing Company.	May 2, 1927.	Completed Oct. 26, 1927...	4,700 00	5,364 94
² Excavating and refilling service pipe trenches in South Boston, Roxbury, Dorchester, West Roxbury, Brighton.	John Williams.....	May 20, 1927.	Completed June 16, 1927...	3,175 00	2,290 80
¹ Excavating and refilling service pipe trenches in Roxbury, Dorchester, West Roxbury, Brighton.	Zoppo & Civitarese.....	June 14, 1927.	Completed July 20, 1927...	3,250 00	2,400 00
¹ Cleaning water pipes in West Roxbury.....	General Pipe Cleaning Company.	July 7, 1927.	Completed Oct. 25, 1927...	10,036 25	10,201 25
¹ Excavating and refilling service pipe trenches in South Boston, Roxbury, Dorchester, West Roxbury, Brighton and Hyde Park.	John Williams.....	July 26, 1927.	Completed Sept. 15, 1927...	5,130 00	5,160 08
⁴ Assembling 100 6-inch gate valves.....	McCulloch Manufacturing Company.	Aug. 3, 1927.	Completed Sept. 1, 1927...	1,350 00	1,363 50
¹ Excavating and refilling service pipe trenches in South Boston, Roxbury, Dorchester, Brighton, West Roxbury and Hyde Park.	L. P. Federico & Co.	Sept. 30, 1927.	Completed Dec. 19, 1927...	5,150 00	4,812 68
¹ Assembling 50 B. & F. post hydrants.....	McCulloch Manufacturing Company.	Oct. 20, 1927.	Completed Dec. 15, 1927...	4,787 50	Nothing.
⁴ Assembling 100 6-inch gate valves.....	McCulloch Manufacturing Company.	Oct. 24, 1927.	Unfinished.....	1,350 00	Nothing.
¹ Setting hydrant, gate, blow-off and meter boxes to replace existing boxes in city proper, South Boston and Roxbury.	M. DeSisto Company.....	Nov. 15, 1927.	Completed Dec. 19, 1927...	1,575 00	1,115 63

¹ Advertised and awarded to the lowest bidder.³ Only bid; not advertised.² Advertised and awarded to the second bidder.⁴ Advertised and awarded to the only bidder.

High Pressure Fire Service.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Contract Estimated.	Amount Expended in 1927.
1 Relocating high pressure hydrants in Kneeland street, between Washington and Albany streets, city proper.	C. & R. Construction Company.	Dec. 10, 1927.	Unfinished.....	\$3,250 00	\$2,751 45

¹ Invitation bids; not advertised; awarded to the lower bidder.

Area of Pavements.
Area in Square Yards and Character of Pavements on Accepted Streets, January 1, 1928.

DISTRICT.	Sheet Asphalt.	Asphalt Concrete.	Granite Block.	Wood Block.	Plank on Bridges.	Brick.	Concrete.	Macadam.	Gravel.	Not Graded.	Totals.
Year 1926 report,	949,017	1,421,142	2,732,658	369,233	27,112	79,456	112,210	5,629,035	461,736	96,808	11,778,967
Per cent.	8.06	12.06	23.20	2.29	0.23	0.68	0.95	47.79	3.92	0.82	100.00
January 1, 1928.											
City Proper	405,001	340,785	871,798	133,967	5,507	13,109	3,401	269,136	337	18,584	2,061,625
Charlestown	6,609	414	261,673	2,622	2,112	736	18,751	151,723	.....	2,504	417,164
East Boston	46,663	39,111	147,490	187	1,422	771	.....	441,337	16,282	865	694,128
South Boston	32,745	57,691	427,407	13,457	5,359	3,081	.....	366,669	13,451	40,103	960,256
Roxbury	208,776	191,764	408,668	23,511	1,022	27,991	16,121	772,403	17,615	986	1,668,893
West Roxbury	126,260	338,957	171,971	417	1,471	.....	27,820	1,117,030	42,806	28,312	1,855,103
Dorchester	144,054	302,156	278,670	45,909	3,458	23,969	31,506	1,602,819	66,515	29,903	2,528,989
Brighton	109,001	260,813	105,957	1,715	1,696	17	41,453	496,681	57,070	6,415	1,083,821
Hyde Park	207	32,301	13,028	2,212	2,829	.....	.....	345,530	206,425	14,303	616,865
Totals,	* 1,070,369	† 1,563,992	‡ 2,689,662	226,947	25,126	69,6397	\$ 130,035	|| 5,563,377	420,564	142,005	11,919,844
Per cent.	9.06	13.12	22.57	1.90	0.21	0.58	1.17	16.67	3.53	1.19	100.00

NOTE.—In the above table the city is subdivided substantially on the boundary lines between the districts as they existed when annexed to Boston. Territory annexed from Brookline is included in city proper.

* Of this amount 470 square yards is Unionite, and 114 square yards is rubber.

† Of this amount 771 square yards is asphalt block; 110,815 square yards is bitulithic; 1,119,076 square yards is bitulithic; 959 square yards is Fibertite; 22,072 square yards is Simaseal; 280,084 square yards is Topeka and 215 square yards is Carey Elastite paving.

‡ Of this amount 945 square yards is cobble, and 1,639,081 square yards is granite block paving on concrete base.

|| Of this amount 116 square yards is Blone Granitoid concrete blocked pavement, and 836 square yards is Solianies.

33,022 square yards public alleys included in this table.

301,215 square yards public streets in charge of Park Department included in this table.

71,345 square yards public streets in charge of Commonwealth of Massachusetts included in this table.

In addition to this table there are 7,031 square yards of accepted footways.

Length of Pavements.
Length in Miles and Character of Pavements on Accepted Streets, January 1, 1928.

District.	Sheet Asphalt.	Asphalt Concrete.	Granite Block.	Wood Block.	Plank on Bridges.	Brick.	Concrete.	Macadam.	Gravel.	Not Graded.	Totals.
Year 1926 report.....	54.04	67.57	104.07	11.51	1.22	3.89	6.70	340.24	29.91	2.57	621.72
Per cent.....	8.69	10.87	16.74	1.85	0.20	0.63	1.08	54.72	4.81	0.41	100.00
January 1, 1928.											
City Proper.....	22.64	14.61	30.19	5.92	0.22	0.62	0.55	15.45	0.07	0.44	96.71
Charlestown.....	0.41	0.03	11.37	0.11	0.08	0.03	0.78	10.55	.....	.....	23.36
East Boston.....	2.07	1.49	6.58	0.01	0.10	0.04	.....	22.02	0.86	0.04	33.21
South Boston.....	2.59	2.60	17.76	0.78	0.25	0.13	.....	19.82	0.74	1.46	46.13
Roxbury.....	11.89	9.45	15.30	1.09	0.04	1.46	0.76	50.26	1.34	0.05	91.64
West Roxbury.....	8.17	17.12	3.75	0.02	0.07	.....	1.83	72.36	2.67	0.32	106.21
Dorchester.....	8.63	15.14	10.44	1.87	0.14	1.07	1.81	97.01	4.53	0.14	140.81
Brighton.....	4.58	12.17	0.92	0.11	0.10	.....	2.22	28.47	3.81	0.11	52.49
Hyde Park.....	.....	1.44	0.07	0.13	0.16	.....	.....	19.78	13.48	0.24	35.30
Totals.....	*60.98	† 74.05	‡ 102.38	10.04	1.16	3.35	\$ 7.98	|| 335.62	27.50	2.80	625.86
Per cent.....	9.74	11.83	16.36	1.60	0.19	0.53	1.28	53.63	4.39	0.45	100.00

Note.—In the above table the city is subdivided substantially on the boundary lines between the districts as they existed when annexed to Boston. Territory annexed from Brookline is included in city proper.

* Of this amount 0.02 mile is Unionite, and 0.00 mile is rubber.

† Of this amount 0.02 mile is asphalt block, and 6.51 miles is asphalt concrete, and 51.38 miles is bitulithic, and 0.06 mile is Fibertine, and 1.28 miles is Simasco and 14.80 miles is Topka, and 0.00 mile is Carey Elastite paving.

‡ Of this amount 0.04 mile is cobble, and 53.69 miles is granite block paving on concrete base.

§ Of this amount 0.06 mile is Blone Granitoid and 0.00 mile is bituminous macadam. 7.28 miles public alleys included in this table.

|| 24 miles public streets in charge of Park Department included in this table. 2.28 miles public streets in charge of Commonwealth of Massachusetts included in this table.

In addition to this table there are 1.36 miles of accepted footways.

The following changes were made in pavement during the year:

0.01 mile or 1,036 square yards sheet asphalt changed to bitulithic.
 0.00 mile or 151 square yards sheet asphalt changed to granite block.
 0.00 mile or 37 square yards asphalt concrete changed to bitulithic.
 0.03 mile or 699 square yards bitulithic changed to sheet asphalt.
 0.00 mile or 6 square yards bitulithic changed to granite block.
 0.01 mile or 104 square yards bitulithic changed to concrete.
 0.01 mile or 100 square yards Topeka changed to sheet asphalt.
 0.00 mile or 51 square yards Topeka changed to bitulithic.
 0.80 mile or 28,953 square yards granite block changed to sheet asphalt.
 0.26 mile or 12,443 square yards granite block changed to bitulithic.
 0.72 mile or 17,659 square yards granite block changed to concrete.
 0.03 mile or 578 square yards wood block changed to sheet asphalt.
 1.46 miles or 42,321 square yards wood block changed to bitulithic.
 0.02 mile or 358 square yards wood block changed to granite block.
 0.01 mile or 278 square yards plank on bridges changed to granite block.
 0.06 mile or 1,834 square yards plank on bridges changed to wood block.
 0.53 mile or 10,891 square yards brick changed to sheet asphalt.
 2.47 miles or 40,270 square yards macadam changed to sheet asphalt.
 0.22 mile or 3,321 square yards macadam changed to asphalt concrete.
 2.87 miles or 57,049 square yards macadam changed to bitulithic.
 0.30 mile or 8,240 square yards macadam changed to granite block.
 0.01 mile or 127 square yards macadam changed to plank on bridges.
 0.05 mile or 798 square yards macadam changed to concrete.
 2.49 miles or 40,164 square yards gravel changed to sheet asphalt.
 0.00 mile or 42 square yards gravel changed to asphalt concrete.
 1.53 miles or 24,111 square yards gravel, changed to bitulithic.
 0.49 mile or 7,987 square yards gravel changed to concrete.
 0.06 mile or 1,994 square yards gravel changed to macadam.
 0.04 mile or 2,198 square yards not graded changed to sheet asphalt.
 0.00 mile or 5,622 square yards not graded changed to granite block.
 0.01 mile or 300 square yards not graded changed to concrete.
 0.00 mile or 1,736 square yards not graded changed to macadam.

EMPLOYEES.

The following tables show the number of requisitions made on the Civil Service Commission for men; the number appointed, reinstated, died, resigned, transferred and retired; also the grade and number of employees in the department:

Requisitions made on the Civil Service Commission	35
Number of men called	45
Number of men certified	98
Number of men appointed	27
Provisional appointments made permanent	1
Promotions allowed	25
Reinstatements allowed	* 14
Number of men resigned	18
Number of men died	40

* Nine on eligible list January 1, 1927.

Number retired under the Veterans' Retirement Act	1
Number retired under the Boston Retirement Act	81
Number of transfers to other departments	14
Number of transfers from other departments	28
Number of men discharged	5

The records of the department show that there are now 3,052 persons eligible for employment in the several divisions and of that number 2,978 were upon the January, 1928, pay rolls.

Grade and Number of Employees.

TITLE.	SERVICES.									Total.
	Central Office.	Paving.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Bridge.	Lighting.	Water.	
Commissioner	1	..	..	..	..	..	..	..	..	1
Division engineers . . . . .	..	1	1	1	..	..	..	1	..	5
Engineers in charge . . . . .	..	1	..	..	..	..	..	..	1	2
Chief clerk	1	..	..	..	..	..	..	..	..	1
Clerks	38	21	8	2	2	1	2	1	42	117
Assistant engineers (civil) . . . . .	..	15	25	1	..	..	10	..	5	56
Draughtsmen . . . . .	..	2	12	..	..	..	5	..	3	22
Instrumentmen . . . . .	..	14	24	..	..	..	4	..	7	49
Rodmen . . . . .	..	2	1	..	..	..	1	..	..	4
Inspectors	1	35	44	53	29	..	3	1	31	197
Foremen . . . . .	..	12	5	10	9	..	1	..	12	49
Subforemen . . . . .	..	20	..	..	..	..	3	..	..	23
Address printers . . . . .	..	..	..	..	..	..	..	..	3	3
Blacksmiths and assistants . . . . .	..	8	3	20	..	..	..	..	5	36
Blueprinters . . . . .	..	2	..	..	..	..	..	..	..	2
Chauffeurs-teamsters	1	17	7	56	24	..	4	..	14	123
Carpenters and assistants . . . . .	..	19	3	5	..	4	14	..	6	51
Chief inspectors . . . . .	..	1	..	..	1	..	..	..	1	3
Cement testers and assistants	3	..	..	..	..	..	..	..	..	3
Chemists and assistants . . . . .	..	2	..	..	..	..	..	..	..	2
Coal passers . . . . .	..	..	3	..	..	..	..	..	..	3
Cashiers . . . . .	..	..	..	..	..	1	..	..	..	1
Drawtenders and assistants . . . . .	..	..	..	..	..	..	129	..	..	129
<i>Carried forward</i>	47	170	136	148	65	6	177	2	131	882

Grade and Number of Employees.—Continued.

TITLE.	SERVICES.										Total.
	Central Office.	Paving.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Bridge.	Lighting.	Water.		
<i>Brought forward.</i>	47	170	136	148	65	6	177	2	131	882	
Deckhands.						25				25	
Engineers (steam).		11	6			12			1	30	
Electricians.			2			1	1			4	
Feeders.		1		6						7	
Firemen.		5	15			30			1	51	
Gatemen.			4			16				20	
General foremen.		2	1		1	1			2	7	
Harnessmakers and assistants.				9						9	
Head chauffeurs.			4							4	
Horseshoers.				7						7	
Janitors.							1			1	
Matrons.							7			7	
Joiners.							2			2	
Laborers.	312	85		110	12	6		170		695	
Lamplighter.						1				1	
Machinist and assistants.			6			9	1		20	36	
Meter testers.									8	8	
Meter readers.									32	32	
Masons (stone and brick).		10							2	12	
Medical inspectors.		1		1	1					3	
Oilers.		14				16				30	
Pipe fitters and repairers.						2		16		18	
Pavers.	74	1							3	78	
Plumbers.									20	20	
Painters.	3	1	10			3	3			20	
Captains.							12			12	
Quartermasters.							12			12	
Repairers.	23	1							94	118	
Roofer.							1			1	
Rammers.		9								9	
Rigger.			1				1			2	
Sealers.									3	3	
<i>Carried forward.</i>	47	615	283	181	177	170	188	2	503	2,166	

Grade and Number of Employees.—Concluded.

TITLE.	SERVICES.									Total.
	Central Office.	Paving.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Bridge.	Lighting.	Water.	
<i>Brought forward.</i>	47	615	283	181	177	170	188	2	503	2,166
Sewer flushers.....			22	.....	.....	.....	.....	.....	.....	22
Supervisors and deputy.....		1	.....	1	1	.....	1	.....	.....	4
Stenographers.....		1	1	.....	.....	.....	.....	.....	.....	2
Stonecutters.....		7	2	.....	.....	.....	.....	.....	.....	9
Superintendents and deputy.....		2	1	.....	.....	.....	.....	.....	2	5
Stockkeepers.....		.....	.....	1	.....	1	.....	.....	1	3
Stableman.....		12	3	24	19	.....	1	.....	1	60
Tankman.....		.....	.....	.....	.....	1	.....	.....	.....	1
Teamsters and helpers.....		78	1	378	227	.....	.....	.....	6	690
Telephone operators.....		.....	.....	1	.....	.....	.....	1	.....	2
Tollmen.....		.....	.....	.....	.....	13	.....	.....	.....	13
Chief veterinarian.....		1	.....	.....	.....	.....	.....	.....	.....	1
Watchman.....		2	10	12	4	.....	2	.....	6	36
Weighers.....		1	.....	1	.....	.....	.....	.....	.....	2
Wharfingers.....		.....	.....	2	.....	.....	.....	.....	.....	2
Wharfmen.....		.....	.....	2	.....	.....	.....	.....	.....	2
Wheelwrights and assistants.....		.....	.....	4	.....	.....	.....	.....	.....	4
Yardmen.....		5	2	12	2	.....	.....	.....	7	28
Totals.	47	725	325	619	430	185	192	2	527	3,052

Number of Employees Actually Employed January 1, 1927, and January 1, 1928.

	Central Office.	Bridge.	Ferry.	Lighting.	Paving.	Sanitary.	Sewer.	Street Cleaning, and Watering.	Water.	Total.
January 1, 1927.....	39	196	176	3	711	641	328	433	536	3,063
January 1, 1928.....	38	191	183	2	710	596	318	413	527	2,978

Total Eligible Force.

January 1, 1927.....	46	198	185	3	737	661	336	446	539	3,151
January 1, 1928.....	47	192	185	2	725	619	325	430	527	3,052

Appointments, Transfers, Resignations, Retirements, Deaths, etc., of Employees.

Died.	Retired, Act of 1922.	Retired Veterans, Act of 1911.	Transferred to Other Departments.	Transferred to Other Services.	Discharged.	Resigned.	January 1, 1927.	SERVICES. 1927-1928.		January 1, 1928.	Transferred from Other Services.	Transferred from Other Departments.	Reinstated.	Appointed.
....	1	....	1	3	....	....	46	Central Office.....	.....	* 47	3	....	1	2
2	6	....	1	2	1	....	198	Bridge.....	.....	192	2	2	....	2
....	3	....	1	7	....	....	185	Ferry.....	.....	185	....	2	1	8
1	....	....	....	....	....	3	Lighting.....	.....	2	....	....	....	....	....
9	27	....	1	13	1	11	737	Paving.....	.....	725	36	7	2	5
9	10	....	2	32	2	4	661	Sanitary.....	.....	619	7	5	1	4
8	15	....	3	5	....	1	446	Street Cleaning.....	.....	430	8	8	....	....
4	7	....	2	10	....	2	336	Sewer.....	.....	325	10	1	....	3
7	12	1	3	7	1	....	539	Water.....	.....	527	13	3	....	3
40	81	1	14	79	5	18	3,151	Totals.....	.....	3,052	79	28	5	27

* Includes eight Central Office employees who are paid on Water Service pay roll.

PART II.
APPENDICES.

APPENDIX A.

CENTRAL OFFICE.	
Appropriation	\$88,097 55
Transfers	116 51
	<hr/>
Expenditures from January 1, 1927, to December 31, 1927	\$88,214 06
	<hr/>
	<i>Expenditures.</i>
Salary, Commissioner	\$9,000 00
Salaries of clerks, stenographers, etc.	70,610 92
Automobile expenses:	
Wages of chauffeur	\$1,699 67
Franklin sedan	2,600 00
Repairs, etc.	46 75
Gasolene and oils	243 09
Tires and tubes	73 30
Supplies	147 13
Registration	15 00
	<hr/>
Printing	4,824 94
Stationery	1,790 27
Postage	786 54
Telephone tolls	475 39
Burroughs adding machine	37 00
Directories	98 00
Photographs	52 50
Books, papers and office supplies	192 50
Premium on bonds	266 00
Expenses of expert	5 00
	<hr/>
	75 00
	<hr/>
	\$88,214 06

APPENDIX B.

REPORT OF THE DIVISION ENGINEER OF THE
BRIDGE AND FERRY DIVISION.

BOSTON, January 1, 1928.

MR. JAMES H. SULLIVAN,
Commissioner of Public Works.

DEAR SIR,—I respectfully submit the following report of the income, expenditures and operation of the Bridge and Ferry Division for the year ending December 31, 1927. The expenditures of the division in the regular maintenance appropriations of the department were \$1,021,741.76. Under a number of special appropriations \$390,752.61 were expended, making the total expenditures for the year \$1,412,494.37.

The more important works undertaken during the past year in the Bridge Service were the rebuilding of the West Newton Street Bridge over the New York, New Haven & Hartford Railroad, and the reconstruction of the spans of Broadway Bridge over the main lines of the New York, New Haven & Hartford Railroad.

In the Ferry Service a new electrically operated ferry bridge with its foundations was constructed at the North Ferry, East Boston.

As noted in the reports for some years past, Congress Street Bridge is in very bad condition and should be rebuilt at once. Chapter 157 of the Acts 1926 authorized the borrowing \$800,000 outside the debt limit for this work and the act has been accepted by the city.

The pile approaches to the draw span of Chelsea Bridge over the North channel of the Mystic river are steadily deteriorating and should be rebuilt preferably with steel superstructure on masonry piers. The work would cost approximately \$1,500,000.

An appropriation has been made for reconstruction of Columbus Avenue Bridge over the Boston & Albany Railroad, and the rebuilding should be completed in the summer of 1928.

In connection with the widening of Morton, Ashland and River streets, the bridges on these streets should be rebuilt.

In the Ferry Service two new boats should be provided in place of the old wooden vessels which are unfit for the heavy motor traffic. The two old wooden ferry bridges should also be replaced by modern electrically operated steel bridges.

Broadway Bridge, over New York, New Haven & Hartford Railroad.

The Boston Bridge Works of Boston was awarded a contract approved February 14, for the rebuilding of span 11 and 12 of this bridge.

These spans are over the main line tracks of the railroad and the steel was in badly corroded condition from the locomotive fumes. Traffic conditions are much improved by rebuilding as in the new design there was eliminated a through girder which in the old structure was in the middle of the roadway so that now the roadway is clear from curb to curb. The entire superstructure of these spans was rebuilt as well as the column bent at Pier 11. The new spans are of steel encased in concrete with concrete slab deck. The roadway is paved with granite block. The sidewalks are concrete; cast-iron plates are provided over the railroad tracks to protect the structure from the blast action of the locomotives.

The old masonry piers were utilized as foundations for the new spans. Foot travel was maintained during construction by a temporary bridge built of wood and steel. A clearance of 16.12 feet was provided above the railroad tracks. This work was completed October 10, 1927. The contract price for its construction was \$68,584.20.

Charlestown Bridge, over Charles River.

On June 10 a contract was approved with Maurice M. Devine for pointing the masonry piers of this bridge. The joints were carefully cleaned by hand tools and the pointing was done with a cement gun which forced the cement mortar completely into the cavities in the joints in a much more satisfactory manner than could be done by hand pointing. The joints were finished by hand tools to make a more satisfactory appearance.

In connection with this work the steelwork of the first plate girder span from the Boston side of the bridge on the westerly side was covered with a protective coating of gunite. This work was completed September 24. The contract price was \$9,000.83.

Chelsea Bridge North.

April 4, 1927, a contract was approved with the Rendle Corporation for repairing the easterly end of the middle draw fender pier of Chelsea Bridge North which had been badly damaged by a steamer. New piling was driven and the timber work renewed where necessary. The work was completed June 14, 1927, at a cost to the city of \$4,765.44.

February 23 a contract was approved with the Boston Bridge Works for repairing the running mechanism of the draw span. This work consisted of adjusting the straps, rods and other machinery at the center bearing. The work was completed April 20 at a cost of \$1,932.79.

June 24 a contract was approved with Maurice M. Devine for furnishing and laying wood paving with asphalt joints on roadway of the draw span. The wooden flooring under the paving was repaired, waterproofing placed on this plank and then the wood block paving laid. The date of completion was August 20. The contract price for this work was \$9,708.65.

August 9 a contract was approved with the Rendle Corporation for repairing the westerly end of the northerly fender pier which had been badly damaged by the steamer "Coulee" of the Fall River Navigation Company. The entire west end of the pier was rebuilt for a distance of about 175 feet at a contract price of \$10,984.01. Work was completed October 6.

Chelsea Bridge South.

A contract with the Boston Bridge Works, Inc., for repairing counterweight links and adjusting the shear locks at Chelsea Bridge over the South channel of the Mystic river was approved March 11, 1927. The contract cost was \$1,939.

Dorchester Avenue Bridge, over Fort Point Channel.

November 3, 1927, a contract was approved with Maurice M. Devine for repairing the sidewalk on the

northeasterly pile approach. The old asphalt sidewalk was removed and replaced with reinforced concrete. The planking, stringers and other timberwork supporting the sidewalk was replaced with new lumber where necessary. This work is still in progress and will be completed at an early date.

Meridian Street Bridge, over Chelsea Creek.

September 13, 1927, a contract was approved with the Rendle Corporation for rebuilding the sidewalks of pile structure. The asphalt sidewalks which were nearly worn out were removed and replaced with reinforced concrete slabs with expansion joints every 30 feet. The wooden flooring carrying this slab was renewed where necessary. The piling supporting the sidewalks was also repaired. The amount paid the contractors for this work was \$9,136.08. Work was completed November 22, 1927.

Northern Avenue Bridge.

The entire steel superstructure of this bridge was cleaned and painted under a contract approved July 1 with Maurice M. Devine. After cleaning with scaling tools and wire brushes, a patch coat of red lead and linseed oil was applied followed by two coats of blue lead and linseed oil. The contract price for the work was \$7,300; the date of completion was September 30.

August 14 a contract was approved with W. H. Ellis & Son Company for repairing the wooden fenders with new piling and timber work. The work was completed September 20; the contract price was \$4,842.12.

December 15 a contract was approved with the Boston Bridge Works for furnishing labor and materials for the repairing of the turning mechanism of the draw span at an estimated cost of \$3,000. This work is still in progress. It involves adjusting the wheels and spider rods, placing a new band on the outside of the wheels, new sleeves in the wheels, rebolting some track sections and some other minor repairs. Some leaks developed in the draw pit masonry and all the stone masonry facing was pointed. This greatly reduced the flow of water but there is no assurance that the leaking condition will not arise again as this draw foundation has been settling. The cost of pointing was \$7,300.

Summer Street Bridge, over Reserved Channel.

A contract with the Rendle Corporation was approved May 25 for replacing old piling, repairing bracing, waling and other timber work of the waterway of this bridge. This work was completed July 2. The contract price was \$3,906.20.

West Newton Street Bridge, over New York, New Haven & Hartford Railroad.

A new steel bridge superstructure has been built on the old abutments, replacing the old superstructure which was in bad condition due to corrosion of the iron-work. The new bridge is of the deck plate girder type, has one roadway and two sidewalks. The roadway is of reinforced concrete slab construction paved with 3½-inch granite block and the sidewalks are granolithic. The sidewalk slabs are removable to enable repairs to be easily made to the pipes underneath. All steel below the floor surface is covered with concrete and protected from blast by cast-iron plates. A clearance of about 16 feet was provided over the railroad tracks. The bridge was built by the A. G. Tomasello & Son Company, under a contract approved January 21, 1927. The work was completed June 29, 1927, at a contract cost of \$34,851.06.

Important repair jobs were done by the day labor force of the Bridge Service as follows: Blue Hill Avenue Bridge. On both roadways new stringers were placed by the railroad and on these was laid new creosoted tongued and grooved planking on which was placed a surface of wood block paving with asphalt joints instead of the wooden sheathing formerly used.

Fairmount Avenue Bridge, over the New York, New Haven & Hartford Railroad.—A completely new wooden floor was built for the roadway; new stringers were placed by the railroad, new creosoted tongued and grooved planking spiked to the stringers by the city force and on this was laid wood block paving with asphalt joints, taking the place of the wooden sheathing.

Summer Street Bridge, over Fort Point Channel.—The wooden flooring of the roadway of both leaves of the draw span, including stringers under plank and top plank, was renewed.

West Fourth Street Bridge, over the New York, New Haven & Hartford Railroad.—The wooden flooring of

the two roadways was completely renewed, the railroad placing new wooden stringers and the city force constructing the under plank and wearing surface.

Granite Avenue Bridge.

The care and control of this bridge is vested in a commission consisting of the Mayor of the City of Boston and the chairman of the Board of Selectmen of the town of Milton.

One half the expense of maintenance is paid by the County of Suffolk and one half by the town of Milton. Chapter 58 of the Acts of 1915 provides for this.

The wooden flooring of the bridge should be completely renewed. The steel should be completely repainted.

The Milton approach of this bridge keeps crowding forward to the draw crack and it is going to be a question of time when something radical will have to be done to keep the draw span free in hot weather so that it can be operated.

Marginal Street Sidewalk, East Boston.

June 21 a contract was approved with Edward J. McHugh of East Boston for placing filling, slope paving and building a wire fence in place of an old collapsed bulkhead about 250 feet long, on Marginal street, near Jeffries Point. This work was under the supervision of this division for the Highway Division and was completed July 22. The contract price for the work was \$3,581.07.

Albany Street Wharf.

September 9 a contract was approved with Walsh & Co. for general repairs to this station. New timber was placed on the ramps and platform, the lower platform was replaced by filling surface with granite block paving, two short concrete retaining walls built and other miscellaneous work done. The contract price was \$11,855.30. The work was completed October 18 and was done under the supervision of this division for the Sanitary Division of the Public Works Department.

Deer Island Steamboat Wharf.

August 1 a contract was approved with the Rendle Corporation for repairing this wharf. The work consisted of renewing decayed piling and timber work,

moving the landing drop and machinery and constructing new pile spring fenders. The contract was completed December 1. The contract price for the work was \$7,168.68. This work was done under the supervision of this division for the Penal Institutions Department.

Fireboat Wharf at Northern Avenue.

A contract was approved with the Franklin Engineering Company May 26 for repairing the wharf and slip for the fireboat Engine 44 of the Fire Department. Some old piles and timber work were renewed. The payment to the contractor was \$2,041. The work was done under the supervision of this division for the Fire Department and was completed June 23.

Fort Hill Wharf.

July 8 a contract was approved with Walsh & Co. for repairing this station. Foundation piling was strengthened, new ramps built, new windows installed and other miscellaneous repairs made. The contractors were paid \$11,699.85 for the work which was completed December 27. This work was done under the supervision of this division for the Sanitary Division of the Public Works Department.

FERRY SERVICE.

The following steam ferryboats are in commission:

Name.	When Built.	Type.	Length.	Gross Tonnage.
Noddle Island (rebuilt).....	1921	Propeller	174 ft. 5 in.	564
General Sumner.....	1900	"	164 " 3 "	450
John H. Sullivan.....	1912	"	172 " 3 "	527
Lieutenant Flaherty.....	1921	"	174 "	727
Ralph J. Palumbo.....	1921	"	174 "	755
Charles C. Donoghue.....	1926	"	174 " 4 in.	756.77
Daniel A. MacCormack.....	1926	"	174 " 4 "	756.77

Two of these boats, the "Noddle Island" and the "General Sumner," should be replaced by new steel boats as they are not suitable to handle the existing traffic.

A contract with the Richard T. Green Company for repairing the ferryboats "Charles C. Donoghue" and "Daniel A. MacCormack" was approved September 20, 1927. The amount paid under the contract was \$9,532.20. The hulls of the boats were cleaned and painted, some rivets repaired, some welding done on the propellers and some minor repairs made.

On February 24 two of the ferryboats were sold at auction, the "Hugh O'Brien" and the "Governor Russell." The "Hugh O'Brien" was sold for \$1,600 and the "Governor Russell" was sold for \$15,000.

"LIEUTENANT FLAHERTY." JANUARY 27, 1927.

A contract with the Richard T. Green Company for repairs to the hull and equipment of the "Lieutenant Flaherty" was approved January 27, 1927. Rivets were repaired or replaced as necessary, the hull cleaned and painted, main engines and auxiliaries adjusted and a new turbine generator installed. The work was completed March 10, 1927, at a contract cost of \$5,367.80.

"NODDLE ISLAND."

A contract with the Atlantic Works for repairing the hull, etc., of the ferryboat "Noddle Island" was approved January 7, 1927, as the ends of the boat were

sagging, the concrete ballast was removed, repairs made to the hull, new telegraph connections installed, the hull cleaned and painted, the main shaft lined up and some other repairs made to the engines and hull. The contract cost was \$9,968.59 and was completed March 9, 1927.

A contract with Richard T. Green Company for repairs to the "Ralph J. Palumbo" was approved April 8, 1927. Rivets and seams were repaired, the hull cleaned and painted, the ends repaired, a new turbine generator installed, some machine repairs made, and one rudder repaired. The amount paid under the contract was \$8,200.40.

A contract with the Bethlehem Shipbuilding Corporation, Ltd., for furnishing and installing new boilers in the ferryboat "John H. Sullivan," was approved June 16, 1927. The amount paid on the contract was \$28,895. The work consisted in removing the existing boilers, building and installing two single end Scotch marine boilers complete with steam drum, furnishing and installing a new air pump, and furnishing and installing two new steam steering engines. The new boilers complied with the requirements of the American Bureau of Shipping.

A contract with the Bethlehem Shipbuilding Corporation, Ltd., for repairing the ferryboat "General Sumner" was approved June 22, 1927. The amount paid under the contract was \$9,190. The work consisted chiefly in cleaning and painting the hull and superstructure, furnishing and installing a new tail shaft, making some repairs to frames and planking of hull, and overhauling some of the machinery.

A contract with the Atlantic Works for repairing bronze propeller blades was approved May 6, 1927. Six blades were recast. Cost, \$930.

Another contract was approved with the Atlantic Works on November 15, 1927, and six more blades were recast. Cost, \$906.

A contract with W. H. Ellis & Son Company for repairing piers at the North and South Ferries was approved October 11, 1927.

The amount paid on the contract was \$22,620.

The outer half of the middle pier, North Ferry, Boston, was rebuilt, and repairs made to all the other piers with the exception of the North Pier, North Ferry, East Boston. New piles were driven where needed

in place of old ones, new oak girders placed as necessary and miscellaneous repairs made.

A contract with J. Edward Ogden Company was approved March 18, 1927, for building an electrically operated ferry bridge with accompanying mechanism at the North Ferry, East Boston. This bridge is of the same type as described in the annual report of 1924. The amount of the contract was \$140,500.

A contract with W. H. Ellis & Son Company was approved March 22, 1927, for building foundations for the new ferry bridge. Two concrete piers supported on piles were built to carry the towers at the outer end of the bridge and a spread footing of reinforced concrete constructed to carry the inner end. The amount paid under the contract for the foundations was \$26,789.

At the headhouse, North Ferry, Boston side, a new gas boiler was installed for heating purposes. The heating equipment was entirely renewed. A new ceiling was erected to cut down the amount of radiation required and the building is being heated far better than formerly and with much less cost.

Yours respectfully,

JOHN E. CARTY,
Division Engineer.

BRIDGE SERVICE.

FINANCIAL STATEMENT, 1927.

Expenditures from Maintenance Appropriation.

Boston bridges	\$452,916 60
Boston and Cambridge bridges	16,496 35
	<u>\$469,412 95</u>

Total Expenditures.

From maintenance appropriation	\$469,412 95
From special appropriations	233,637 77
	<u>\$703,050 72</u>

EXPENDITURES ON BOSTON BRIDGES.

(1.) Administration:

Salaries:

Division engineer	\$3,750 00
Supervisor	3,258 33
Engineers and draughts-	
men	31,256 29
Clerk	2,100 00
Inspectors	4,192 30
Medical inspector	200 00
Foreman	2,258 05
Veterans' pensions	4,260 76
Holiday	6,757 07
Vacations	1,955 84
Injured employees	214 28
Printing, postage and sta-	
tionery	1,052 16
Travelling expense	273 78
Telephone and telegrams	43 15
Engineers supplies and in-	
struments	174 04
Repairing instruments	100 15
Typewriter inspection	32 00
Office supplies	140 36
Blueprint room	216 63
	<u>\$62,235 19</u>

(2.) Yard and Stockroom:

Yard:

Clerk, janitor and watch- men	\$3,190 97
Travelling expense	242 90
Tools, new	966 88
Tools, repaired	552 62
Telephone	235 63
Repairing buildings	552 81
New tool houses	680 47
Supplies	299 83
	<hr/>
	\$6,722 11

Stockroom:

Stock purchased	\$11,019 17
Stock used	13,368 60
Decrease in stock,	<hr/> 2,349 43
	<hr/> <u>\$4,372 68</u>

Automobiles, Trucks and Compressor.

	Truck, B-1.	Truck, B-2.	Auto, B-3.*	Auto, B-4.*	Auto, B-5.	Compressor, B-6.	Total.
Cost, new.....		\$3,225 00	\$1,330 00		\$1,300 00		\$5,855 00
Chauffeurs' wages.....				\$1,642 01	1,244 41		2,886 42
Storage.....					20 00		20 00
Repairs.....	\$511 30	47 66	234 13	387 36	186 21	\$3 00	1,369 66
Supplies.....	24 20	54 25	55 88	3 87	41 87		180 07
Tires and tubes (new and repaired).....	407 08	149 77	65 40	67 01	162 02		851 28
Gasolene and oil.....	248 50	262 08	222 72	211 23	353 63	80 95	1,379 11
Registration.....	2 00	4 00	10 00	10 00	17 00	4 00	47 00
Equipment.....		286 50				282 68	569 18
Totals.....	\$1,193 08	\$4,029 26	\$1,918 13	\$2,321 48	\$3,325 14	\$370 63	\$13,157 22

* Auto B-3 was used by foreman and B-4 by supervisor until December 27, 1927, when B-4 was transferred to foreman and a new auto purchased for supervisor and numbered B-3.

Tide Water Bridges.

BRIDGES.	Drawtenders' Salaries.	Mechanics' Wages.	Material.	Repair Bills.	Supplies.	Total.
Broadway.....	\$16,363 66	\$463 35	\$81 81	\$1,224 14	\$272 04	\$18,405 00
Charlestown.....	22,455 19	1,676 43	1,983 92	2,000 86	494 65	28,611 05
Chelsea North.....	18,728 93	3,257 01	1,313 07	3,851 34	1,496 07	28,646 42
Chelsea South.....	18,769 59	390 30	.....	966 81	1,170 12	21,296 82
Chelsea Street.....	16,381 04	1,467 14	581 75	1,005 09	349 78	19,784 80
Congress Street.....	16,779 63	803 45	568 41	1,815 10	1,184 24	21,150 83
Dorchester Avenue.....	16,340 66	1,333 30	473 99	857 07	372 32	19,377 34
Dover Street.....	16,376 74	2,339 90	1,028 81	1,652 16	292 10	21,689 71
L Street*.....	16,382 94	1,345 71	365 51	520 87	293 64	18,908 07
Malden.....	16,760 71	1,809 13	878 96	1,250 04	809 85	21,508 69
Meridian Street.....	16,689 46	1,024 40	379 25	1,222 48	398 95	19,714 54
Northern Avenue.....	18,935 89	4,375 01	7,076 72	6,877 08	5,044 76	42,309 46
Summer Street.....	16,846 70	3,520 26	6,413 29	1,190 95	358 84	28,330 04
Warren.....	17,139 32	3,998 02	1,188 81	1,497 47	882 00	24,705 62
Totals.....	\$244,950 46	\$27,803 41	\$22,334 30	\$25,931 46	\$13,419 36	\$334,438 39

* Now Summer Street over Reserved Channel.

Repairs on Inland Bridges.

BRIDGES.	Labor and Material.
Albany Street.....	\$397 14
Allston Street.....	196 82
A Street Stairs.....	123 68
Austin Street — Prison Point.....	22 34
Arlington Street.....	981 38
Babson Street.....	53 33
Beacon Street, over Boston & Albany Railroad.....	38 99
Bennington Street.....	31 45
Berkeley Street.....	89 44
Blue Hill Avenue.....	5,504 49
Boston Street, over railroad.....	116 28
Boylston Street, over Boston & Albany Railroad.....	933 91
B Street Stairs.....	174 13
Brooks Street Stairs.....	675 00
<i>Carried forward.....</i>	\$9,338 38

Repairs on Inland Bridges.--Continued.

BRIDGES.	Labor and Material.
<i>Brought forward.....</i>	\$9,338 38
Byron Street.....	3 72
C Street Stairs.....	39 55
Cambridge Bridge.....	1 20
Cambridge Street, Allston.....	17 94
Central Avenue.....	139 65
Chelsea Street, over viaduct.....	190 00
Columbus Avenue.....	211 68
Dana Avenue.....	427 83
Dartmouth Street.....	300 00
Dorchester Avenue, over railroad.....	118 53
Everett Street.....	28 14
Fairmount Avenue.....	6,857 25
Ferdinand Street.....	428 62
Gove Street (Foot).....	439 26
Harvard Street.....	3 00
Huntington Avenue.....	65 14
Hyde Park Avenue.....	1 48
Jones Avenue (Foot).....	51 00
Massachusetts Avenue, over New York, New Haven & Hartford Railroad.....	197 77
Massachusetts Avenue, over Boston & Albany Railroad.....	129 34
Metropolitan Avenue.....	70 67
Milton Street.....	270 88
Milton Lower Mills.....	60 00
Morton Street.....	73 90
Neptune Road.....	98 66
New Allen Street.....	194 20
Oakland Street.....	65 62
Public Landing (Northern Avenue).....	390 00
Peabody Square.....	19 00
Redfield Street.....	104 04
Reservoir Road.....	77 07
Sprague Street.....	54 48
Shawmut Avenue.....	37 86
Southampton Street.....	720 34
Summer Street, over A street.....	166 41
<i>Carried forward.....</i>	\$21,392 61

Repairs on Inland Bridges.—Concluded.

BRIDGES.	Labor and Material.
<i>Brought forward</i>	\$21,392 61
Summer Street, over B Street.....	759 06
Summer Street, over C Street.....	2 10
Stuart Street.....	24 00
Toll Gate Way (Foot).....	232 55
Wadsworth Street.....	229 26
West Fourth Street.....	7,451 61
West Rutland Square (Foot).....	19 00
Winthrop.....	37 20
Cleaning Bridges.....	3,480 00
Snow.....	5,085 23
Total	\$38,712 62

SUMMARY OF EXPENDITURES.

Administration	62,235 19
Yard and stockroom	4,372 68
Automobiles, trucks and compressor	13,157 72
Tide water bridges	334,438 39
Inland bridges	38,712 62
Total	\$452,916 60

SPECIAL APPROPRIATIONS.

BRIDGES, REPAIRS, ETC.

BLUE HILL AVENUE BRIDGE.

Material	\$7,388 96
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BROOKS STREET STAIRS.

Repair bills	468 95
Transit Department pay roll	1,509 60
	1,978 55

CHARLESTOWN BRIDGE.

Steves Lacios Company	1,621 81
Paint	105 93
The Boston Bridge Works, Inc.	1,442 98
Maurice M. Devine	9,000 83
Advertising	7 50
Traveling expense	4 00
Transit Department pay roll	340 80
	12,523 85

<i>Carried forward</i>	\$21,891 36
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<i>Brought forward</i>	\$21,891 36
CHARLESTOWN BRIDGE STOREHOUSE, PAVING APPROACHES TO.		
S. J. Tomasello	.....	384 02

CHELSEA BRIDGE NORTH.

The Boston Bridge Works, Inc.	.....	\$1,932 79
Maurice M. Devine	.....	9,708 65
The Rendle Corporation	.....	16,531 52
Repair bills	.....	700 72
Advertising	.....	23 25
Photographs	.....	30 00
Traveling expense	.....	22 56
Engineering	584 95
	29,534 44

CHELSEA BRIDGE SOUTH.

The Boston Bridge Works, Inc.	1,939 12
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CONGRESS STREET BRIDGE.

R. H. Baker & Co., Inc.	\$89 55
C. & R. Construction Company	790 36
	.....	879 91

CHELSEA STREET, OVER BOSTON & MAINE RAILROAD.

Buck-MacDonald Company	329 71
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DORCHESTER AVENUE BRIDGE.

W. H. Ellis & Son Company	\$1,625 87
Maurice M. Devine	2,396 38
Advertising	.....	8 00
	.....	4,030 25

DOVER STREET BRIDGE.

Repair bills	.....	\$196 49
Transit Department pay roll	.....	97 20
	.....	293 69

EVERETT STREET BRIDGE.

V. James Grande	.....	\$8,150 00
Advertising	.....	8 80
	.....	8,158 80

MERIDIAN STREET BRIDGE.

The Rendle Corporation	.....	\$8,679 28
Advertising	.....	8 00
Traveling expense	.....	5 10
	.....	8,692 38

NORTHERN AVENUE BRIDGE.

Maurice M. Devine	.....	\$7,300 00
W. H. Ellis & Son Company	.....	4,842 12
Advertising	.....	15 50
Repair bills	.....	17 36
New pump	.....	573 00
Transit Department pay roll	62 00
Engineering	467 96
	13,277 94

<i>Carried forward</i>	\$89,411 62
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<i>Brought forward</i>	89,411 62
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SUMMER STREET BRIDGE, OVER FORT POINT CHANNEL.

C. & R. Construction Company	507 38
W. H. Ellis & Son Company	124 77
Advertising	7 75
Transit Department pay roll	298 70
	938 60

SUMMER STREET BRIDGE, OVER RESERVED CHANNEL.

The Rendle Corporation	83,906 22
Advertising	5 40
License	1 00
	3,912 42

WARREN BRIDGE.

The Rendle Corporation	7,176 30
Motors and control	2,646 83
Installing motors	943 00
Power connection with Boston Elevated Rail-	
way	103 53
Guard rail around motors	87 00
New heater	850 00
	11,806 66

WEST FOURTH STREET BRIDGE.

Lumber	8,257 65
Iron	31 77
Traveling expense	3 60
Tools	48 00
	8,341 02

A STREET STAIRS.

Transit Department pay roll	340 80
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ALBANY STREET BRIDGE.

Transit Department pay roll	81 60
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ARLINGTON STREET BRIDGE.

Repair bills	1,480 63
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B STREET STAIRS.

Transit Department pay roll	340 80
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BERKELEY STREET BRIDGE.

Repair bills	147 75
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BROADWAY BRIDGE.

Repairs	370 13
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CHELSEA STREET BRIDGE.

Advertising	9 90
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COLUMBUS AVENUE BRIDGE.

Repair bills	20 79
Flagman	42 11
Photographs	33 00
Transit Department pay roll	32 80
	128 70

<i>Carried forward</i>	117,310 63
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Brought forward	\$117,310 63
HUNTINGTON AVENUE BRIDGE.	
Transit Department pay roll	48 80
<u>\$117,359 43</u>	

BROADWAY BRIDGE, SOUTH BOSTON.	
The Boston Bridge Works, Inc.	\$68,584 20
Inspection of steel	118 72
Advertising	23 75
Traveling expense	124 35
Material	21 58
Waterproofing and plastic on car rails	186 13
Removing and installing car service	186 75
Engineers' supplies	31 05
Engineering	2,708 74
	<u>\$71,985 27</u>

TREMONT STREET BRIDGE.	
Adjusting pavement	\$643 50
Foundation pier	460 09
Rail guards	407 99
Grillage beams	110 72
New lights	314 90
Installing lights	794 06
Painting lights	22 00
Traveling expense	2 80
Engineering	416 20
	<u>\$3,172 26</u>

WEST NEWTON STREET BRIDGE.	
A. G. Tomasello & Son, Inc.	\$34,851 06
Inspection of steel	98 49
Advertising	23 75
Setting plates	33 28
Traveling expense	14 90
Engineers' supplies	31 84
Engineering	4,298 19
	<u>\$39,351 51</u>

MORTON STREET IMPROVEMENTS.	
Photographs	\$44 00

OAKLAND AND ASHLAND STREETS, IMPROVEMENTS.	
Photographs	\$33 00
Engineering	644 37
<u>\$677 37</u>	

RIVER STREET CONSTRUCTION.	
Test holes	\$195 43
Photographs	33 00
Engineering	821 50
<u>\$1,049 93</u>	

Expenditures from Special Appropriations, 1927.

	Balance from 1926.	Total Credits Including Balances Carried Over and Transfers.	Expended During Year 1927.	Balances Unexpended December 31, 1927.
Beacon Street Bridge, rebuilding.....	\$4,115 37	\$4,115 37	.....	\$4,115 37
Bridges, repairs, etc.....	43,436 32	143,436 32	\$117,359 43	26,076 89
Broadway Bridge, South Boston.....	67,709 36	77,709 36	71,985 27	5,724 09
Cambridge Street Bridge, rebuilding.....	16,894 92	16,894 92	.....	16,894 92
Congress Street Bridge, plans, etc.....	13,882 04	13,882 04	.....	13,882 04
Dartmouth Street Bridge.....	2,746 14	2,746 14	.....	2,746 14
* Massachusetts Avenue Bridge.....	14,096 01	4,096 01	.....	4,096 01
Tremont Street Bridge.....	53,224 93	53,224 93	3,172 26	50,052 67
West Newton Street Bridge.....	44,776 16	44,776 16	39,351 51	5,424 65
† Morton Street Improvements,.....	.....	.....	44 00	.....
† Oakland and Ashland Streets Improvements.....	.....	.....	677 37	.....
† River street reconstruction.....	.....	.....	1,049 93	.....
	\$260,881 25	\$360,881 25	\$233,639 77	\$129,012 78

* \$10,000 transferred to Broadway Bridge, South Boston.

† See also Paving Service.

Bridge Openings, 1927.

	STEAMERS.			SAILING VESSELS.			TUGS.			BARGES.			ALL OTHERS.			TOTAL NUMBER OF VESSELS.			Total Number of Vessels.	Total Number of Openings.
	Day.	Night.	Total.	Day.	Night.	Total.	Day.	Night.	Total.	Day.	Night.	Total.	Day.	Night.	Total.	Day.	Night.	Total.		
Broadway.....	32	29	61	79	4	83	1,387	71	1,458	289	31	320	503	9	512	2,290	144	2,434	482	922
Charlestown.....	20	20	22	2	24	2,636	627	3,263	457	125	582	2,129	730	2,859	5,264	1,484	6,748	1,701	1,482	
Chelsea North.....	1,414	1,53	1,567	75	3	78	10,575	901	11,476	1,687	163	1,850	786	88	874	14,587	1,268	15,745	1,693	6,307
Chelsea South.....	84	7	91	42	42	5,251	244	5,495	90	5	95	2,868	164	3,032	8,335	420	8,755	1,977	2,770	
Chelsea Street.....	87	55	142	4	4	4	1,493	596	2,089	79	63	142	1,029	103	1,132	2,692	817	3,509	740	1,771
Congress Street.....	175	33	208	81	3	84	2,025	203	2,828	447	64	511	588	12	600	3,916	315	4,231	752	2,313
Dorchester Avenue.....	102	47	149	75	2	77	1,410	49	1,459	298	15	313	469	5	474	2,354	118	2,472	499	1,341
Dover Street.....	.....	.....	.....	75	3	78	1,406	61	1,467	295	19	314	544	43	587	2,320	126	2,446	484	1,108
* L Street.....	46	20	66	52	5	57	2,188	70	2,258	311	9	320	1,251	44	1,295	3,848	148	3,996	1,003	2,746
Malden.....	104	59	163	14	14	1,011	48	1,059	243	23	266	364	94	458	1,736	224	1,960	395	1,174	
Meridian Street.....	793	425	1,218	26	1	27	6,063	1,572	7,635	913	528	1,441	2,835	496	3,331	10,630	3,022	13,652	1,909	7,383
Northern Avenue.....	612	345	957	83	3	86	4,455	244	4,699	480	74	554	1,891	62	1,953	7,521	728	8,249	1,491	3,943
Summer Street.....	160	12	172	78	4	82	2,583	236	2,819	428	80	508	594	38	632	3,843	370	4,213	723	2,376
Warren.....	16	16	24	1	25	2,580	670	3,250	564	132	696	2,090	801	5,274	1,604	6,878	1,623	3,082		
Totals.....	3,645	1,185	4,830	730	31	761	45,663	5,592	51,355	6,581	1,331	7,912	17,941	2,689	20,630	74,560	10,728	85,288	15,472	38,718

* Now Summer Street Bridge, over Reserved Channel.

GRANITE AVENUE BRIDGE.*

Drawtenders' salaries	:	:	:	:	:	:	:	\$2,584 64
Material	:	:	:	:	:	:	:	25 31
Repairs	:	:	:	:	:	:	:	56 30
Supplies	:	:	:	:	:	:	:	51 06
								<u><u>\$2,717 31</u></u>

* Maintained jointly by County of Suffolk and town of Milton.

Granite Avenue Bridge Draw Openings from January 1 to December 31, 1927.

OPENINGS,	STEAMERS,			SAILING VESSELS,			TUGS,			BARGES,			ALL OTHERS,			TOTAL NUMBER OF VESSELS,			TOTAL NUMBER OF CARGOES,			TOTAL NUMBER OF OPENINGS,		
	Day	Night	Total	Day	Night	Total	Day	Night	Total	Day	Night	Total	Day	Night	Total	Day	Night	Total	Day	Night	Total			
			Day			Total			Total			Total			Total			Total			Total	Total		
13	1	14	6	1	7	199	199	199	199	86	86	86	93	93	93	26	119	397	28	425	425	43	43	303

FERRY SERVICE.

FINANCIAL STATEMENT FOR THE YEAR ENDING
DECEMBER 31, 1927.

1. Receipts.

Total cash receipts during the year	\$89,242 37
Cash in hands of tollmen at beginning of year	200 00
<hr/>	
	\$89,442 37
<hr/>	
Cash paid over to City Collector	\$89,242 37
Cash in hands of tollmen December 31, 1927	200 00
	<hr/>
	\$89,442 37
<hr/>	

2. Appropriations and Expenditures.

Received from annual appropriations for Ferry Service	\$547,038 06
Transferred from Bridge Service	\$5,238 86
Transferred from Lighting Service	51 89
	<hr/>
	5,290 75
	<hr/>
Unexpended balances from special appropriations, January 1, 1927	\$368,044 01
Appropriation from taxes for ferry improvements, etc.	25,000 00
	<hr/>
	393,044 01
	<hr/>
Total expenditures	\$945,372 82
	<hr/>
	706,413 66
	<hr/>
Unexpended balances of special appropriations, December 31, 1927	* \$238,959 16
	<hr/>

3. Result of Operations for the Year.

Receipts for the year (net income)	\$89,242 37
Ordinary expenses (maintenance appropriation)	\$547,038 06
Interest paid on ferry debt	55,007 50
	<hr/>
Carried forward	\$602,045 56
	\$89,242 37

* Of this amount \$50,000 in loans has been authorized, but not issued.

<i>Brought forward</i>	\$.602,045	56	\$.89,242	37
Depreciation on ferryboats	80,114	23		
Decrease in value of machinery and tools	518	93		
Decrease in value of supplies on hand	252	72		
	<hr/>		<hr/>	
	\$.682,931	44		
Increase in value of fuel on hand	1,420	10		
	<hr/>		<hr/>	
Net outgo for the year			681,511	34
Net loss for the year			<hr/>	<hr/>
			* \$592,268	97

* Does not include expenditures for special appropriations.

Balance Sheet.
End of Fiscal Year, December 31, 1927.

ASSETS.	LIABILITIES.
AVAILABLE ASSETS:	CURRENT LIABILITIES:
Cash in hands of tollmen at close of year.....	\$200 00
Inventory of supplies, viz.:	
Fuel.....	5,159 70
Supplies for maintenance.....	7,598 87
Rents receivable.....	607 84
Total available assets.....	\$13,566 41
CONTINGENT ASSETS:	CONTINGENT LIABILITIES:
City Treasury.....	* 238,959 16
	Appropriations account.....
	None.
	*\$238,959 16
FIXED ASSETS:	FIXED LIABILITIES:
Real estate, land and buildings ¹	2 610,100 00
Ferryboats ³	1,190,174 04
Machinery, tools, etc	4,670 38
Total tangible assets.....	\$2,057,469 99
Deficiency or loss by operation and maintenance of the ferries for sixty-nine years to date,	11,532,218 95
	\$13,589,688 94
	* Includes \$30,000 authorized, but not issued.
	² Assessors' figures.
	³ Total cost to date, per ferry books.....
	Less boats sold, depreciated or destroyed..
	\$2,178,182 01
	988,007 97
	\$1,190,174 04
1 Original purchase.....	\$276,375 00
New buildings, drops, ships, cost to 1913.....	607,523 64
Land, Lincoln's Wharf, cost to 1887.....	5,562 32
Land, Battery Wharf, cost, 1893.....	10,000 00
New drops, both ferries, cost from 1923 to December 31, 1927.....	\$899,461 16
	152,322 95
	\$1,051,784 11

Comparative Balance Sheets at the Close of Each Year.

	January 31, 1924.	January 31, 1925.	December 31, 1925.	December 31, 1926.	December 31, 1927.
<i>Assets.</i>					
Cash, tollmen's capital.....	\$200 00	\$200 00	\$200 00	\$200 00	\$200 00
Rents receivable.....	392 35	489 21	592 34	583 34	607 84
Fuels and supplies in stock.....	23,097 11	20,088 22	18,366 96	11,589 19	12,758 57
City Treasurer (balance of appropriation).....	113,072 86	217,676 36	1,020,064 26	368,044 01	238,959 16
Ferryboats (less depreciation).....	914,754 98	857,439 71	800,124 44	1,270,288 27	1,190,174 04
Machinery and tools.....	1,624 14	4,163 58	3,747 23	4,634 31	4,670 38
Real estate, land and buildings (assessors' valuation).....	610,100 00	610,100 00	610,100 00	610,100 00	610,100 00
Total tangible assets.....	\$1,663,241 44	\$1,710,157 05	\$2,453,195 23	\$2,265,439 12	\$2,057,469 99
Cost of avenues, etc., East Boston (previous to 1871) ¹	315,815 68	315,815 68	315,815 68	315,815 68	315,815 68
Deficiency of assets (loss).....	8,149,845 42	8,966,610 71	9,726,416 60	10,465,340 20	11,216,403 27
Totals.....	\$10,128,902 54	\$10,992,583 47	\$12,495,427 51	\$13,046,595 00	\$13,589,688 94
<i>Liabilities.</i>					
Capital invested by City of Boston to date.....	\$10,015,829 68	\$10,774,907 11	\$11,475,363 25	\$12,678,550 99	\$13,350,729 78
Appropriations account (credit balances).....	113,072 86	217,676 36	1,020,064 26	368,044 01	238,959 16
Total liabilities.....	\$10,128,902 54	\$10,992,583 47	\$12,495,427 51	\$13,046,595 00	\$13,589,688 94

Details of Capital Invested by the City of Boston.

Total expenditure to date per ferry books.....	\$17,658,444 98	\$18,501,559 12	\$19,273,121 91	\$20,540,211 31	\$21,296,977 47
Interest of debt for the year (per City Auditor's reports).....	44,585 00	41,710 00	38,752 50	50,352 50	55,007 50
Interest, previous years, etc. (net debits, per City Auditor's reports),	279,148 85	279,148 85	279,148 85	279,148 85	279,148 85
Total expenditures.....	\$17,982,178 83	\$18,822,417 97	\$19,591,023 26	\$20,869,712 66	\$21,631,133 82
Deduct total receipts paid to City Collector.....	7,966,349 15	8,047,510 86	8,115,660 01	8,191,161 67	8,280,404 04
Excess expenditures, capital.....	\$10,015,829 68	\$10,774,907 11	\$11,475,363 25	\$12,678,550 99	\$13,350,729 78

¹ Included in deficiency of assets in Table 4.

Comparison of Receipts, Appropriations and Expenditures.

	1923-24.	1924-25.	1925 (11 months.)	1926.	1927.
RECEIPTS.					
From foot passengers (tollmen).....	\$31,059 13	\$27,347 91	\$22,254 80	\$23,087 75	\$21,907 61
From foot passes (office sales).....	254 40	280 20	264 70	361 30	309 90
From extra passengers on teams (gatemen).....	1,212 80	1,525 94	727 12	800 61	720 35
From team tickets (office sales).....	1,621 50	1,947 00	2,026 00	2,307 00	2,753 50
From strip team tickets (tollmen).....	15,412 00	13,204 50	11,400 50	12,531 00	12,187 00
From cash fares for teams (gatemen).....	41,072 74	35,796 62	30,542 28	35,328 46	35,129 77
From free ferries July 4.....	1 00	1 00	1 00	1 00	1 00
Total from rates.....	\$90,663 57	\$80,103 17	\$67,216 40	\$74,417 12	\$73,309 13
From rents.....	398 02	417 16	368 02	323 04	489 50
From old material sold.....	122 03	64 68	15 00	12 00	68 00
From other sources.....	586 76	576 70	549 73	549 50	* 15,375 74
Total ordinary receipts.....	\$91,770 38	\$81,161 71	\$68,119 15	\$75,501 66	\$89,242 37
EXPENDITURES (ORDINARY).					
Office:					
1 Division engineer's salary (part).....	\$1,250 00	\$1,250 00	\$833 33	\$1,250 00	\$1,250 00
2 General foreman and cashier	4,968 59	5,013 70	4,704 06	5,259 69	5,416 09
Clerk.....	1,284 29	1,386 59	1,281 13	1,459 83	1,500 00
Retired veterans' pensions.....	7,449 09	7,633 27	6,442 76	6,247 13	4,161 53
Retired employees' pensions.....	3,210 00	2,921 00	2,404 00	2,215 00	1,942 00
Medical inspector (part).....	83 34	83 33	91 67	91 67	100 00
Stationery.....	160 54	43 04	301 18	142 00	129 86

Printing.....	1,178 60	986 60	1,282 89	1,594 75	1,281 43
Telephones.....	246 17	249 52	237 89	270 02	279 30
Advertising.....	33 00	38 50	7 50	53 20	101 73
Car fares.....	97 35	88 17	101 45	109 73	127 26
Postage.....	8 00	4 00	20 00	4 00	4 00
Premiums, surety companies,.....	85 00	85 00	85 00	94 00	91 00
Total office expenses.....	\$20,083 97	\$19,852 72	\$17,796 86	\$18,791 02	\$16,384 20
Perryboats and landings:					
a Employees (wages).....	\$315,339 26	\$302,376 44	\$328,261 69	\$367,640 21	
Fuel.....	92,904 36	75,275 43	62,388 96	66,738 24	67,657 76
Teaming, weighing coal, etc.....	2,986 03	3,206 97	3,152 02	4,331 75	2,848 00
Supplies.....	15,567 00	22,490 54	15,506 25	17,664 04	17,207 55
Gas.....	1,007 43	752 33	908 61	1,149 09	1,272 55
Oil.....	1,769 82	2,543 80	1,125 48	1,857 99	1,877 44
Electric light.....	4,154 60	4,973 19	4,579 53	5,848 39	6,583 97
Towing teams by electric motors.....	166 13	604 57	843 42	954 13	121 21
Repairs of boats.....	50,977 87	51,230 02	51,571 46	48,702 43	58,516 16
Repairs of buildings, piers and drops.....	13,905 12	24,814 05	9,528 99	9,103 14	9,455 05
Furnishings.....	255 50	256 00	326 50	319 25	427 45
⁴ Other expenditures.....	3,025 36	2,095 58	2,076 17	2,595 49	2,336 36
Total.....	\$48,684 78	\$523,527 46	\$172,240 69	\$516,316 65	\$552,328 81

* Includes \$13,447.85 received from sale of ferryboat "Governor Russell" and \$1,387.85 from sale of ferryboat "Hugh O'Brien."

¹ Remander paid by Bridge Service.

² Included in employees (wages) after February 1, 1916, in office books.

³ Includes payment under Workmen's Compensation Act.

⁴ Includes repairs of coal carts, medical attendance, etc.

Comparison of Receipts, Appropriations and Expenditures.—Concluded.

	1923-24.	1924-25.	1925. (11 months.)	1926.	1927.
EXPENDITURES FROM SPECIAL APPROPRIATIONS.					
East Boston Ferry, improvements, etc.	\$165,179.21	\$202,726.78	\$192,096.24	\$154,879.78	\$9,930.44
Ferryboats, repairs, etc.	172.10				
Ferryboat "Noddle Island" ....	.....	\$,290.30			
Ferry improvements, etc.	79,814.01	63,984.60	62,273.08	24,404.15	1,761.90
East Boston Ferry, two additional boats, and other permanent improvements	.....	.....	3,242.78	532,736.32	142,392.51
Total expenditures, regular and special.	\$743,850.10	\$798,529.14	\$729,852.79	\$1,228,336.90	\$706,413.66
Balances in treasury unexpended.	113,072.86	217,676.36	1,020,064.26	368,044.01	238,959.16
APPROPRIATIONS.					
Regular annual appropriations.	\$198,084.78	\$521,688.80	\$188,910.17	\$533,021.57	\$547,038.06
Transfers from other sources.	122,293.34	11,838.66	.....	.....	1,529.75
East Boston Ferry, improvements, etc. ....	.....	329,500.00	6 155,000.00	.....	.....
Ferryboat "Noddle Island"	2 81,002.23	4 6,721.13	5 77,884.05	7 80,000.00	9 60,000.00
Ferry improvements, etc. ....	.....	.....	8 25,000.00	.....	25,000.00
East Boston Ferry, two additional boats. ....	.....	.....	.....	.....	.....
	\$601,980.35	\$903,132.64	\$1,393,910.17	\$533,021.57	\$577,328.81

1 Transferred from other appropriations.

2 Transferred from other appropriations \$31,002.93 appropriation from taxes, \$50,000.

3 Appropriation from loan inside debt limit, \$275,000 transferred from other appropriations, \$20,000.

4 Transferred from other appropriations, \$6,721.13.

5 Appropriation from taxes, \$80,000 transferred from other appropriations, \$17,881.05.

6 Loan of \$80,000 inside of debt limit transferred from other appropriations, \$75,000.

7 Appropriation from taxes, \$50,000.

8 Loan of \$75,000 outside of debt limit; appropriation of \$75,000 from taxes.

9 Appropriation from taxes, \$60,000.

Total Expenditures Upon Ferries Since 1858-59.

Expenditures for avenues, paving interest, etc., previous to the purchase of the ferries by the city	\$444,101 30
Purchase of the ferries, April, 1870	276,375 00
Expenditures for ferryboats since April, 1870,	2,178,182 01
Expenditures for new buildings, piers, drops, etc.	1,457,143 39
Expenditures for tools and fixtures (prior to 1910)	14,752 46
Expenditures for land from Lincoln's Wharf in 1887	5,562 52
Expenditures for land from Battery Wharf in 1893	10,000 00
 Total expenditures on capital account	\$4,386,116 68
Expenditures for repairs of all kinds	2,348,945 84
Expenditures for fuel	2,663,291 87
Expenditures for salaries and wages	9,490,269 66
Expenditures for all other purposes	2,742,509 77
 \$21,631,133 82	

Total Receipts from Ferries Since 1858-59.

Receipts from rents, etc., previous to purchase of ferries	\$29,588 56
Receipts from ferry tolls since purchase of ferries	7,948,377 20
Receipts from rents since purchase of ferries	71,671 76
Receipts from sale of ferryboats	167,403 14
Receipts from all other sources, per ferry books	32,828 53
Receipts from all other sources, additional, per City Auditor	30,734 85
 Total receipts from all sources	\$8,280,604 04
Less amount with tollmen as capital	200 00
 Total receipts, auditor's reports	\$8,280,404 04

REGULAR ANNUAL (ORDINARY) AND SPECIAL APPROPRIATION (EXTRAORDINARY) OF THE FERRY SERVICE FOR THE YEAR ENDING DECEMBER 31, 1927.

Appropriations (regular) for the year ending December 31, 1927	\$547,038 06
Transferred from Bridge Service, \$5,238 86	
 <i>Carried forward</i>	\$547,038 06

<i>Brought forward</i>	\$5,238 86	\$547,138 06
Transferred from Lighting		
Service	51 89	
	—————	—————
		5,290 75
Amount of expenditures (regular) for the year		<u>\$552,328 81</u>
	—————	—————

SPECIAL APPROPRIATIONS.

EAST BOSTON FERRY, IMPROVEMENTS, ETC.

Unexpended balance, January 1, 1927		\$10,612 67
Expenditures for year 1927		9,930 44
Unexpended balance December 31, 1927		<u>\$682 23</u>
Expenditures for year made up as follows:		
Pay rolls, labor, etc.		\$136 16
Travel expense		8 50
Amount paid to W. H. Ellis & Son Company, under contract for foundation for ferry bridge, North Ferry:		
Amount of contract	\$29,287 56	
Less amount paid in 1926	19,501 78	
	—————	9,785 78
Total		<u>\$9,930 44</u>

East Boston Ferry, two additional boats and other permanent improvements:

Unexpended balance, January 1, 1927		\$289,020 90
Expenditures for year 1927		142,392 51
Unexpended balance December 31, 1927		<u>\$146,628 39</u>

Expenditures for year made up as follows:

Pay rolls, labor and engineering		\$4,454 98
Travel expense		76 24
Labor and materials testing pontoons on North Ferry		107 10
Miscellaneous		115 82
Amount paid to Joseph A. Singarella, under contract, for remodeling canopy, North Ferry:		
Contract price	\$1,620 00	
Extra work under order	278 50	
	—————	1,898 50

Amount paid to W. H. Ellis & Son Company, under contract for ferry bridge, North Ferry, East Boston:

Amount of work done under contract	\$25,988 62
Extra work under order	230 34
	—————
	\$26,218 96
Less 15 per cent retained	3,932 84

22,286 12

Amount paid to J. Edward Ogden Company, Inc., under contract for electrically operated ferry bridges with gallows frame and accompanying machinery:

Amount of contract	\$140,500 (95 per cent) completed	\$133,475 00
Less 15 per cent retained		20,021 25

113,453 75

\$142,392 51

Ferry improvements, etc.:

Unexpended balance, January 1, 1927	68,410 44
Appropriation from taxes	25,000 00
	<hr/>
	\$93,410 44
Expenditures for year	1,761 90
	<hr/>
Unexpended balance December 31, 1927	\$91,648 54
	<hr/>

Expenditures for year made up as follows:

Advertising	72 75
Lumber	330 81
Returns electric plug rents	394 02
One Bryant gas fire boiler	964 32
	<hr/>
	\$1,761 90

RECEIPTS AT EACH FERRY.

North Ferry.

FROM TOLLMEN.	From Foot Passengers.	From Tickets.	Totals.
Boston side.....	\$4,264 02	\$1,986 50	\$6,250 52
East Boston side.....	3,840 82	2,410 00	6,250 82
Totals.....	\$8,104 84	\$4,396 50	\$12,501 34

From tollmen	12,501 34
From gatemen:	
20,179 foot passengers at 1 cent,	\$201 79
Cash fares for teams	7,276 61
	<hr/>
7,478 40	
Total at North Ferry	\$19,979 74
	<hr/>

South Ferry.

FROM TOLLMEN.	From Foot Passengers.	From Tickets.	Totals.
Boston side.....	\$7,179 79	\$4,093 00	\$11,272 79
East Boston side.....	6,622 98	3,697 50	10,320 48
Totals.....	\$13,802 77	\$7,790 50	\$21,593 27

From tollmen			\$21,593	27
From gatemen:				
51,856 foot passengers at 1 cent		\$518	56	
Cash fares for teams		28,153	16	
			<u>28,671</u>	72
Total at South Ferry			<u>\$50,264</u>	99
North and South Ferries			\$70,244	73
Tickets paid for at ferry office			3,063	40
Received in lieu of free ferries July 4, 1927			1	00
Total from rates			\$73,309	13
Rents for the year			489	50
Headhouse privileges			400	00
Care of public telephone booths			48	00
Commission on public telephone			92	04
Old material sold			68	00
Boats sold			14,835	70
Total receipts for year			<u>\$89,242</u>	37

TRAVEL ON THE FERRIES FROM JANUARY 1, 1927,
TO DECEMBER 31, 1927, INCLUSIVE.

	North Ferry.	South Ferry.
Foot passengers at 1 cent each	830,663	1,432,133
Foot passengers by ticket	10,360	20,076
Total foot passengers	<u>841,023</u>	<u>1,452,209</u>
One-horse teams, light motor trucks, pleasure carriages and runabouts	94,753	219,961
Two-horse pleasure carriages, hacks and touring cars	78,476	319,124
Two-horse teams and motor trucks,	85,312	163,039
Three-horse teams and heavy motor trucks	1,261	2,161
Four-horse teams	150	1,153
Free teams, hacks and motor vehicles	10,295	18,033
	<u>270,247</u>	<u>723,471</u>

Motor Vehicle Traffic (Reports of Captains).

January 1, 1927, to December 31, 1927.

	North Ferry.	South Ferry.	Total.
Runabouts.....	¹ 28,252	² 86,431	114,683
Touring cars.....	³ 98,639	⁴ 357,857	456,496
Trucks.....	⁵ 72,321	⁶ 183,004	255,325
Totals.....	199,212	627,292	826,504

¹ Includes 872 free.⁴ Includes 8,391 free.² Includes 1,845 free.⁵ Includes 3,654 free.³ Includes 4,870 free.⁶ Includes 6,143 free.

Total paying foot passengers	2,293,232
Total foot passengers carried	<u>2,293,232</u>
Total paying teams	965,390
Total free teams	28,328
	<u>993,718</u>

TOTAL TRAVEL OF BOTH FERRIES FROM FEBRUARY 1, 1922,
TO DECEMBER 31, 1927.

	1922-23.	1923-24.	1924-25.	1925. (11 mons.)	1926.	1927.
One-horse teams *.....	502,407	445,839	406,336	331,086	348,147	314,714
Two-horse teams †.....	341,257	314,672	291,710	222,543	263,763	248,351
Three-horse teams.....	1,850	1,548	1,249	736	1,868	3,422
Four-horse teams.....	6,061	4,816	2,105	1,514	2,380	1,303
Two-horse carriages, hacks ‡.....	368,711	366,846	338,031	290,361	365,540	397,600
Two-cent tolls, handcarts, etc.	4,333	4,409	3,098	2,282		
Drag-wheels, etc.....	2	5	35			
Paid teams at both ferries.....	1,224,621	1,138,135	1,042,564	848,522	981,698	965,390
Free teams at both ferries.....	29,349	26,197	27,988	24,417	26,195	28,328
Total teams at both ferries..	1,253,970	1,164,332	1,070,552	872,939	1,007,893	993,718
Foot passengers paid.....	3,711,491	3,224,419	2,844,317	2,298,192	2,418,209	2,293,232
Foot passengers free.....	1,865	1,650	1,584	270		
Total foot passengers.....	3,713,356	3,246,089	2,845,901	2,298,462	2,418,209	2,293,232

Note.—Team travel includes automobiles.

* Includes one-seat automobiles. † Includes motor trucks. ‡ Includes two-seat automobiles.

APPENDIX C.

REPORT OF THE DIVISION ENGINEER OF
THE HIGHWAY DIVISION.

BOSTON, January 2, 1928.

MR. JAMES H. SULLIVAN,
Commissioner of Public Works.

DEAR SIR,—I submit herewith a statement of the activities and expenditures of the Lighting and Paving Services for the year ending December 31, 1927.

The maintenance expenditures for the Highway Division for the year were as follows:

Lighting Service	.....	\$953,642	82
Paving Service	.....	1,860,155	10
Total	.....	<u>\$2,813,797</u>	<u>92</u>

MAINTENANCE.

The division forces were engaged during the year resurfacing macadam roadways, patching and repairing defects in roadways and sidewalks.

The Brighton yard plant has been called upon to furnish hot and cold mixed asphalt and tar for the various parts of the city and the repair work on asphalt and bitulithic pavements out of guarantee. This work has been done by the division forces.

The snow plowing of streets in the suburbs was done under the direction of the district foremen. This year the work was greatly extended so that every street in the residential parts of the city was kept open to travel. This is the first time such a result has been accomplished.

CONSTRUCTION.

During the year contracts were awarded to do work on about one hundred and three streets: There were about 45,000 yards of recut granite block laid; 139,000 yards of sheet asphalt; 133,000 yards of bitulithic, all

laid on a concrete base; 9,800 yards of reinforced concrete, and 150,000 yards of artificial stone sidewalks.

Forty-two streets laid out under the "Highways, making of," appropriation were constructed.

The following are important thoroughfares that were reconstructed: Lexington street, Meridian to Shelby street; Medford street, Chelsea to Main street; A street, Congress street to Dorchester avenue; East Broadway, L street to Farragut road; Dock square and Faneuil Hall square; Boylston street, Tremont to Charles street and Berkeley to Exeter street; Park square, Boylston street to Columbus avenue; Columbus avenue, Park square to Stuart street; Stuart street, Broadway to Columbus avenue; Washington street, Dover street to Massachusetts avenue; Columbus avenue, Dartmouth to Northampton street; Stuart street, Huntington avenue to Dartmouth street; Beacon street, Massachusetts avenue to Raleigh street; Brookline avenue, Brookline line to Fenway; Longwood avenue, Brookline avenue to Riverway; Crawford street, Warren street to Walnut avenue; Harold street, Walnut avenue to Seaver street; Dudley street, Harrison avenue to Blue Hill avenue; Harrison avenue, East Lenox street to Warren street; Freeport street, Dorchester avenue to Old Colony Parkway; Quincy street, Warren street to Columbia road.

The following is a list of streets that were widened and reconstruction ordered. The work was commenced during the year: River street, from Blue Hill avenue to Everett square, Hyde Park; Kneeland street, Washington street to Atlantic avenue; Ashland street, Wood avenue to Wilmot street; Oakland street, Orlando to Hebron street; Morton street, Druid to Washington street, was graded and work completed during the year.

STREET SIGNS.

During the year the Highway Division has commenced the erecting of new street signs. The sign plate is of blue enamel background with a white porcelain letter; they are inclosed in a malleable iron container frame bolted to an ornamental malleable section, the whole being attached to the post with steel clamps, nuts and bolts.

Two sizes of malleable iron sections are used, one to fit the iron pipe posts and one to fit the boulevard type of street lamp posts. The pipe posts are of standard

wrought-iron pipe of $3\frac{1}{2}$ inches inside diameter, set 3 feet in the ground. A galvanized malleable iron acorn cap is used with each pipe post. At the close of the year these new street signs have been set up in all of the city proper as far south as Northampton street and the main thoroughfares from Dorchester, Roxbury, West Roxbury and Brighton.

LIGHTING SERVICE.

The Lighting Service has installed the boulevard type of white way lamps in the following streets: Newbury street, Arlington to Clarendon street; Corinth, Birch, Poplar and South streets in the Roslindale business section; Blue Hill avenue, between Talbot avenue and Morton street.

Eighteen street lights have been installed on the new Southern Artery. The new posts are of the Westinghouse Sheridan type with hollow spun concrete posts.

The new light unit is a fifteen hundred candle power multiple incandescent twenty ampere lamp with the rippled glass globe covering the lamp unit. These lamps are supplied by resonant controlled relays. When this work is completed there will be sixty-seven of these new lamps installed on the new Southern Artery.

Respectfully,

JOSHUA ATWOOD,
Division Engineer.

HIGHWAY DIVISION — LIGHTING SERVICE.

FINANCIAL STATEMENT.

*Expenditures January 1, 1927, to December 31, 1927.**Electric Lighting:**Arc.*

Edison Electric Illuminating Company	\$533,350 96
Charlestown Gas and Electric Company	27,739 04
	<hr/>
	\$561,090 00

Incandescent.

Edison Electric Illuminating Company	\$114,644 96
Charlestown Gas and Electric Company	1,316 25
Charlestown Gas and Electric Company fire alarm	274 99
	<hr/>
	116,236 20

Gas Lighting:

Boston Consolidated Gas Company	\$247,222 51
Charlestown Gas and Electric Company	13,117 70
Charlestown Gas and Electric Company fire alarm	601 46
	<hr/>
	260,941 67

Salaries and Wages:

Division Engineer (part of)	\$1,250 00
Clerk	2,358 17
Stenographer and clerk	346 25
Lighting inspector	1,858 33
	<hr/>
	5,812 75

Automobile Expense:

Gasolene, oil, etc.	\$111 93
Registration	10 00
Shoes and tubes, new and repairs.	11 65
Supplies	764 76
Repairs	46 48
	<hr/>
	944 82

Carried forward	\$945,025 44
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<i>Brought forward</i>	.\$945,025	44
<i>Construction:</i>		
Installing lamps and posts and removing and relocating lamps and posts	4,961	29
<i>Office Expenses:</i>		
Printing	\$120	00
Postage	32	00
Stationery and periodicals	34	42
	186	42
<i>Miscellaneous.</i>		
Travel expenses (car fares)	\$25	00
Typewriter repairs and inspec- tion	12	00
Gas lamp posts	3,878	00
	3,915	00
Total	\$954,088	15
Less rebates on installations	445	33
Total	<u>\$953,642</u>	<u>82</u>

Revenue Credited to General Revenue.

Lighting Boston and Cambridge Bridges	.\$1,462	37
Damage to posts	726	87
	<u>\$2,189</u>	<u>24</u>

The following is a statement of the work done during the year under the supervision of the Division Engineer.

Arc lamps have been provided for skating and tobogganing during the season at Franklin Field, Franklin Park and Wood Island Park, the same as in years past.

Boulevard type white way arc lamps have been installed in Park square, Providence street, Columbus avenue, Dock square, Kneeland street, Newbury street, Washington street, between Dover street and Massachusetts avenue, city proper; Audubon road and Fenway, Roxbury; New road, Circuit Drive, Franklin Park; Corinth street, Birch street, Poplar street, South street, West Roxbury; Hyde Park avenue, Hyde Park.

Boulevard type white way incandescent lamps have been installed on Huntington avenue, city proper; New Southern Artery, Blue Hill avenue, between Talbot avenue and Morton street, Dorchester. Thus throughout the city the lighting system has been increased including the boulevard type and reinforced cement

posts by the installation of 115 arc lamps, 306 incandescent lamps and 81 gas lamps at various locations.

Petitions and requests for new lamps received from citizens and from officials, also complaints in relation to the Lighting Service have been investigated and attended to. All streets in the underground district prescribed for the year have been inspected and the necessary changes and additions have been made.

The number of miles of streets and ways lighted by this service is as follows:

Public streets and alleys	625.86
Public footways	9.35
Park roads, footways, private streets and alleys approximately	290.79
Total	926 00

During the year the following defects were reported by the police: arc lamps, 4,575; incandescent, 1,669 and gas lamps, 1,281.

There are in operation 21,668 arc, incandescent and gas lamps, divided as follows: 6,093 arc, 5,532 incandescent, 9,878 single mantle gas lamps and 165 single mantle fire alarm gas lamps.

LAMPS INSTALLED.

Magnetite arc lamps	160
Tungsten lamps	329
Single mantle gas lamps	144
Single mantle gas lamps (fire alarm)	20
	653

LAMPS DISCONTINUED.

Magnetite arc lamps	*45
Tungsten lamps	23
Single mantle gas lamps	83
	151

* Forty-two series magnetite arc lamps changed to 1,500 candle power series incandescent lamps. One 40 candle power series incandescent lamp changed to 125 candle power series incandescent lamp.

The following table shows the work of setting and repairing and altering lamp-posts, brackets, service, etc.:

The following table shows the number of lamps of various types in use on January 1, 1928, as compared with the number in use on January 1, 1927.

	January, 1928.	January, 1927.	Increase or Decrease.
Single mantle gas.....	9,878	9,817	61
Fire alarm gas.....	165	145	20
Magnetite series.....	6,093	5,978	115
Tungsten-incandescent.....	5,532	5,226	306
	21,668	21,166	502

STREET LAMP OUTAGES.

Rebates for lamps not lighted on schedule time or out before the proper time have been received on the various monthly bills as follows:

DATE.	Arc.	Incandescent.	Gas.
January, 1927.....	210.82	3.29	64.67
February.....	165.52	9.66	13.44
March.....	107.42	3.20	13.57
April.....	50.76	1.53	8.90
May.....	88.90	2.52	6.95
June.....	42.97	12.74	2.39
July.....	66.26	1.57	3.02
August.....	104.01	7.04	4.24
September.....	77.06	2.06	3.76
October.....	90.29	2.40	9.32
November.....	179.25	9.18	10.15
December.....	155.68	5.47	10.78
	1,338.94	60.66	151.19

GAS LIGHTING.

There are 9,878 single mantle gas lamps and 165 single mantle fire alarm gas lamps.

The city furnishes the lamp-posts, the gas company sets the lamp-posts and provides service pipes laid from the gas mains to the top of the posts; maintain all such pipes and posts in good condition and repair, furnish gas, lanterns, burners and all other necessary equipment including labor for lighting and care.

The Lighting Service provides for the gas, lighting and care of fire alarm signal lamps and the Fire Department for the posts, setting and repairing of same.

Gas Lamps.

LIGHTING CONTRACT.	Gas District.	Number of Lamps.	Type of Lamp.	Rated Candle Power.	Gas Consumed per Hour.	Hours of Burning per Annum.	Cost of Gas per Lamp per Annum.	Cost per Lamp for Lighting and Care per Annum.	Total Cost per Lamp per Annum.
Boston Consolidated Gas Company,*	South Boston, East Boston, Dorchester, Roxbury, Brighton, West Roxbury.	9,372 142	Single mantle. Single mantle. F. A.	60 60	3 feet. 3 feet.	3,886.45 3,886.45	\$11.00 \$11.00	\$15.20 \$15.20	\$26.20 \$26.20
Charlestown Gas and Electric Company.*	Charlestown,	506 23	Single mantle. Single mantle. F. A.	60 60	3 feet. 3 feet.	3,886.45 3,886.45	11.00 11.00	15.20 15.20	26.20 26.20

* Ten-year contract approved May 20, 1924.

There are 6,093 magnetite arc lamps, 2,081 40 candle power, 3,125 80 candle power, 30 100 candle power; 55 132 candle power; 32 250 candle power; 11 528 candle power; 15 1,000 candle power; 23 950 candle power; 160 1,500 candle power incandescent lamps.

The electric companies provide and set the lamp-posts, except the lamp-posts for incandescent lamps supplied from underground circuits, furnish lamps, overhead wires, underground conduits, cables and connections and all other necessary equipments and maintain them in good condition and repair.

The lighting rates for electric lamps are in accordance with the following table:

DESCRIPTION OF LAMPS.	Fixed Costs per Lamp per Year.	Running Cost per Lamp Hour.
40 candle power incandescent lamp, series.....	\$10 00	.22 cent
40 candle power incandescent lamp, multiple ..	10 00	.22 cent
86 candle power incandescent lamp, multiple ..	10 80	.26 cent
80 candle power incandescent lamp, series.....	10 80	.26 cent
100 candle power incandescent lamp, series.....	12 00	.30 cent
132 candle power incandescent lamp, multiple ..	13 50	.36 cent
250 candle power incandescent lamp, series.....	18 00	.6 cent
528 candle power incandescent lamp, multiple ..	32 00	1 cent
1,000 candle power incandescent lamp, series.....	34 00	1.4 cent
950 candle power incandescent lamp, multiple ..	32 00	1.3 cent
1,475 candle power incandescent lamp, multiple ..	36 00	1.5 cent
1,500 candle power incandescent lamp, series.....	36 00	1.5 cent

A deduction at the rate of 1 cent per hour for lamps of 100 candle power or less and 5 cents per hour for all other lamps is made for outage.

Arc Lamps.

COMPANY.	Number of Lamps.	Connected.	Type of Lamps.	Type of Circuits.	Terminal.	Lighting Hours.	Cost of Lamp per Annun.
Edison Electric Illuminating Company,	1,878	Overhead.	Magnetic.	Series 6.6 amp. D. C.	528	3,827	\$93.42
	3,915	Underground.	Magnetic.	Series 6.6 amp. D. C.	528	3,827	93.42
Charlestown Gas and Electric Company,	226	Overhead.	Magnetic.	Series 6.6 amp. D. C.	528	3,827	93.42
	74	Underground.	Magnetic.	Series 6.6 amp. D. C.	528	3,827	93.42

NOTE.—In the above the candle power figures are the official designations. The wattage figures are here eliminated.

Incandescent Lamps.

COMPANY.	Number of Lamps.	Type of Lamps.	Type of Circuits.	Candle Power.	Lighting Hours.	Cost of Lamp per Annun.
Edison Electric Illuminating Company.....	2,064	Tungsten.	Series 6.6 amp. D. C.	40	3,827	\$18.42
		Tungsten.	Multiple amp. D. C.			
	3,125	Tungsten.	Multiple amp. D. C.	66	3,827	20.75
			Multiple amp. D. C.			
	30	Tungsten.	Series amp. D. C.	80	3,827	
			Series.			
	55	Tungsten.	Multiple.	132	3,827	23.48
	32	Tungsten.	Series 6.6 amp. D. C.	250	3,827	27.28
			Multiple amp. D. C.			
Charlestown Gas and Electric Company.....	11	Tungsten.	Multiple amp. D. C.	528	3,827	40.97
	23	Tungsten.	Multiple.	950	3,827	69.28
	30	Tungsten.	Multiple.	1,475	3,827	81.76
	130	Tungsten.	Series amp. A. C.	1,500	3,827	93.42
	17 F. A.	Tungsten.	Series 6.6 amp. D. C.	40	3,827	18.42
	15	Tungsten.	Series amp. D. C.	1,000	3,827	87.59

Note.—In the above the candle power are the official designations. The wattage figures are here eliminated.

FINANCIAL STATEMENT, PAVING SERVICE.

MAINTENANCE.

Appropriation, from taxes	\$1,860,678 74
Transfer from Lighting Service	15,476 36
	<hr/>
	\$1,876,155 10
Transfer to Reconstructing and Repairing Streets by Contract	16,000 00
	<hr/>
Expended during the year	\$1,860,155 10

SPECIAL APPROPRIATIONS.

<i>Highways, making of:</i>	
Amount expended during the year	\$549,786 68

DEPARTMENTAL EQUIPMENT.

Balance January 1, 1927	\$44,794 84
Expended during the year by Sanitary Service	42,330 00
Balance December 31, 1927	\$2,464 84

GARAGE, HANCOCK STREET YARD.

Balance January 1, 1927	\$884 87
Expended during the year	529 35
Balance December 31, 1927	\$355 52

GRANOLITHIC SIDEWALK.

Balance January 1, 1927	\$52,597 69
Appropriation from taxes	50,000 00
	<hr/>
Expended during the year	\$102,597 69
	76,028 23
Balance December 31, 1927	\$26,569 46

LAND, EAST BOSTON.

Balance January 1, 1927	\$640 00
Expended during the year	0 00
Balance December 31, 1927	\$640 00

PERMANENT STREET PAVEMENT.

Appropriation. Loan inside the debt limit	\$500,000 00
Expended during the year	436,489 73
Balance December 31, 1927	<u>\$63,510 27</u>

RECONSTRUCTING AND REPAIRING STREETS BY CONTRACT.

Balance January 1, 1927	\$369,779 81
Appropriation from taxes	250,000 00
Transfer from Paving Service	16,000 00
Revenue	600 00
	<u>\$636,379 81</u>
Expended during the year	589,317 69
Balance December 31, 1927	<u>\$47,062 12</u>

STREET SIGNS.

Balance January 1, 1927	\$25,000 00
Appropriation from taxes	25,000 00
	<u>\$50,000 00</u>
Expended during the year	35,941 91
Balance December 31, 1927	<u>\$14,058 09</u>

CAMBRIDGE STREET AND COURT STREET.

Expended during the year	<u>\$8,919 89</u>
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DOCK SQUARE AND FANEUIL HALL SQUARE IMPROVEMENT.	
Expended during the year	<u>\$47,051 13</u>

KNEELAND STREET IMPROVEMENT.

Expended during the year	<u>\$41,692 03</u>
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MORTON STREET IMPROVEMENT.

Expended during the year	<u>\$22,201 31</u>
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TREMONT STREET IMPROVEMENT.

Expended during the year	<u>\$3,149 15</u>
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OAKLAND STREET AND ASHLAND STREET IMPROVEMENT.

Expended during the year	<u>\$19,752 81</u>
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RIVER STREET RECONSTRUCTION.

Expended during the year	<u>\$5,840 88</u>
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PAVING SERVICE.

SUMMARY OF EXPENDITURES.

Paving Service, maintenance	\$1,860,155	10
Highways, making of	549,786	68
Departmental equipment (Sanitary Service) ¹		
Garage, Hancock street yard	529	35
Granolithic sidewalks	76,028	23
Permanent street pavement	436,489	73
Reconstructing and repairing streets by contract,	589,317	69
Street signs	35,941	91
Cambridge street and Court street	8,919	89
Dock square and Faneuil Hall square improvement	47,051	13
Kneeland street improvement	41,692	03
Morton street improvement	22,201	31
Tremont street improvement	3,149	15
Oakland street and Ashland street improvement,	19,752	81
River street reconstruction	5,840	88
 Total	 <u>\$3,696,855</u>	 89

INCOME.

Statement showing the amount of bills and cash deposited with the City Collector from January 1, 1927, to December 31, 1927, and credited to General Revenue.

Edgestone and sidewalk assessments	\$18,497	38
Permits	26,997	33
Labor, materials furnished, etc.	13,389	37
 Total	 <u>\$58,884</u>	 08

AMOUNT PAID INTO THE CITY TREASURY
DURING THE YEAR.

Edgestone and sidewalk assessments	\$26,841	29
Permits	26,674	33
Labor, material furnished, etc.	11,718	22
Services of inspector (from 1926)	108	00
 Total	 <u>\$65,341</u>	 84

¹ \$42,330.

HIGHWAY DIVISION — PAVING SERVICE.
Work Done by Contract.

	Old.	New.	Total Old and New.
Edgestone set.....	105,967 linear feet.	60,447 linear feet.	175,414 linear feet.
Crushed stone foundation for edgestone.....	.....	4,858 " "	4,858 " "
1 Concrete base laid.....	16,973 square yards.	250,376 square yards.	267,349 square yards.
2 Granite block paving laid, gravel base, gravel joints.....	6,293 " "	383 " "	6,676 " "
3 Recut granite block paving laid, grout joints.....	.....	57,526 " "	57,526 " "
4 Second-hand granite block paving laid with grout joints.....	1,617 square yards.	43,236 " "	44,853 " "
5 Sheet asphalt and binder laid.....	.....	138,948 " "	138,948 " "
6 Bitulithic pavement laid.....	392 square yards.	131,902 " "	132,494 " "
7 Concrete pavement laid.....	.....	26,007 " "	26,007 " "
Wood block pavement laid.....	116 square yards.	.....	116 " "
Extra binder.....	.....	10½ tons.	10½ tons.
8 Artificial stone sidewalks laid.....	12,735 square yards.	136,838 square yards.	149,573 square yards.
Brick sidewalks laid.....	7,253 " "	3,230 " "	10,483 " "
Crushed stone and cinder sidewalks laid.....	518 " "	.....	518 " "
Steel reinforcement laid.....	.....	156,725 pounds.	156,725 pounds.
Earth excavation.....	58,521 cubic yards.	6,022 " "	58,521 cubic yards.
Filling furnished.....	.....	6,022 " "	6,022 " "

Crushed stone furnished.....	5,061 tons.	5,061 tons.
Loam furnished.....	164 cubic yards.	164 cubic yards.
Old concrete base removed.....	5,213 square yards.	5,213 square yards.
Covers, catch-basins and Bradley heads.....	934 " "	934 " "
Wood fence.....	130 linear feet.	130 linear feet.
Brick block pavement removed.....	17½ square yards.	17½ square yards.
Walls removed.....	561 cubic yards.	561 cubic yards.
Trees removed.....	92 " "	92 " "
Rock excavation.....	7,304 " "	7,304 " "
Catch-basins built.....	21 " "	21 " "
Dry wells.....	3 " "	3 " "
Concrete walls.....	95 linear feet.	95 linear feet.
Rubble walls.....	3,120 " "	3,120 " "

Explanations of Numerals on Preceding Pages.

¹ Concrete base laid six (6) inches thick.....	250,376 square yards.	250,376 square yards.
Total concrete base laid.....		
² Granite blocks laid with gravel joints.....	383 square yards.	383 square yards.
Total granite blocks laid with gravel.....		
³ Recut granite block laid, grout joints, formerly macadam roadway.....	1,799 square yards.	
Recut granite block laid, grout joints, formerly pitch joints.....	6,939 " "	
Recut granite block laid, grout joints, formerly grout joints.....	4,825 "	
Recut granite block laid, grout joints, formerly wood block paving.....	40,660 "	"
Recut granite block laid, grout joints, formerly gravel joints.....	3,303 "	"
Recut granite block laid, grout joints, formerly filling.....		
Total recut granite block laid with grout joints.....		57,526 square yards.
⁴ Second-hand granite block paving laid, grout joints, formerly gravel roadway.....	89 square yards.	
Second-hand granite block paving laid, grout joints, formerly grout joints.....	8,716 "	"
Second-hand granite block paving laid, grout joints, formerly gravel joints.....	34,388 "	"
Second-hand granite block paving laid, grout joints, formerly macadam roadway.....	43 "	"
Total second-hand granite block paving laid with grout joints.....		43,236 square yards.
⁵ Sheet asphalt pavement laid, formerly macadam roadway.....	39,063 square yards.	
Sheet asphalt pavement laid, formerly gravel roadway.....	30,302 "	"
Sheet asphalt pavement laid, formerly granite block paving.....	21,218 "	"
Sheet asphalt pavement laid, formerly brick block paving.....	8,894 "	"
Sheet asphalt pavement laid, formerly bitulithic pavement.....	19,471 "	"
Total sheet asphalt pavement laid.....		138,948 square yards.
⁶ Bitulithic pavement laid, formerly gravel roadway.....	38,886 square yards.	
Bitulithic pavement laid, formerly macadam roadway.....	50,210 "	"
Bitulithic pavement laid, formerly wood block paving.....	37,804 "	"
Bitulithic pavement laid, formerly granite block pavement.....	5,002 "	"
Total bitulithic pavement laid.....		131,902 square yards.
⁷ Concrete pavement laid, formerly gravel roadway.....	9,815 square yards.	9,815 square yards.
Total concrete pavement laid.....		
⁸ Artificial stone sidewalks laid with foundation.....	44,818 square yards.	
Artificial stone sidewalks laid on existing foundation.....	92,020 "	"
Total artificial stone sidewalks laid.....		136,838 square yards.

Work Done by Paving Service Forces During 1927.

	Old.	New.	Total.
Edgestone set.	29,053 linear feet.	8,359 linear feet.	37,412 linear feet.
Concrete base laid.	1,354 square yards.	13 square yards.	1,351 square yards.
Roadway, granite block, gravel joints.	11,167 ^a	11,180 ^a	11,180 ^a
Roadway, granite block, grout joints.	20,730 ^a	406 ^a	21,136 ^a
Gutter, granite block, gravel joints.	10,864 ^a	1,866 ^a	12,730 ^a
Gutter, granite block, grout joints.	3,398 ^a	106 ^a	3,504 ^a
Flagging crosswalk, gravel joints.	780 ^a	34 ^a	814 ^a
Roadway, wood block, sand joints.	7,898 ^a	149,814 square yards.	7,898 ^a
Asphalt penetration macadam surface placed.	398,747 square yards.	149,814 ^a	398,747 ^a
Macadam surface patched.	68,815 ^a	68,815 ^a	68,815 ^a
Asphalt blanket coat.	1,200 ^a	1,200 ^a	1,200 ^a
Macadam roadway sanded.	1,943 ^a	1,943 ^a	1,943 ^a
Sheet asphalt surface placed.	4,915 square yards.	4,915 ^a	4,915 ^a
Sheet asphalt surface patched *.	9,928 ^a	9,928 ^a	9,928 ^a
Sheet asphalt surface patched †.	55,414 ^a	582 square yards.	55,996 ^a
Brick sidewalks laid.	7,437 ^a	2,092 ^a	9,529 ^a
Artificial stone sidewalks laid.	200,837 square yards.	134 ^a	200,837 ^a
Sidewalk excavating, no sidewalks laid.	567 cubic yards.	134 ^a	567 cubic yards.
Roadway excavating, roadway constructed.	461 ^a	1,133 square yards.	461 ^a
Gravel or crushed stone sidewalks surfaced.	286 cubic yards.	1,133 square yards.	1,133 square yards.
Brick block pavement laid.	1,465 ^a	296 square yards.	286 ^a
Concrete roadway laid.	1,465 ^a	296 square yards.	1,761 ^a
New style sign posted erected.		1,308	1,308

* Patched with asphalt mixture from Brighton asphalt plant.

† Patched with bituro, kyrock, emulsified asphalt and stone, taric compound and stone, etc.

Objects of Expenditures from the Various Appropriations, Classified by Districts, from January 1, 1927, to
December 31, 1927.

DISTRICTS.	Macadam Repairs.	Paved Street Repairs.	Removal of Snow.	Street Cleaning.	Edgestone and Sidewalk Repairs.	Street Work.	Schedule A, Miscellaneous.	Totals.
South Boston and Dorchester North.....	\$12,862 38	\$17,875 14	\$29,822 12	\$1,441 02	\$13,628 19	\$141,073 22	.....	\$216,702 07
East Boston and Breed's Island.....	14,593 19	1,251 66	14,537 67	1,229 61	11,826 99	67,627 55	.....	111,066 67
Charlestown.....	7,681 75	10,204 49	40,673 69	2,005 45	12,654 69	119,795 26	.....	193,015 33
Brighton.....	36,598 63	210 33	20,882 54	29,038 27	13,326 15	134,491 25	.....	234,547 17
West Roxbury.....	40,157 92	1,453 54	38,301 72	28,271 26	11,231 25	290,012 85	.....	409,428 54
Dorchester.....	28,459 49	2,368 74	23,474 78	12,678 23	17,295 73	116,733 04	.....	200,710 01
Roxbury South and Jamaica Plain.....	44,328 77	2,366 38	40,291 76	49,585 93	18,582 41	351,148 77	.....	515,304 02
City Proper.....	32,213 03	26,605 65	214,796 24	787 03	51,331 37	551,178 88	.....	876,912 20
Ashmont.....	23,630 66	1,440 47	21,351 18	14,381 60	7,402 40	214,496 16	.....	282,702 47
Hyde Park.....	19,851 21	162 25	11,043 92	11,645 39	2,760 42	14,780 72	.....	60,243 91
Miscellaneous.....	.....	.....	.....	.....	.....	1,639,053 74	2: \$527,257 71	596,311 45
Totals.....	\$240,377 03	\$63,935 65	\$463,875 62	\$151,063 79	\$160,039 60	\$2,070,391 44	\$27,257 71	\$3,696,943 84

¹ Includes, garage, Haneock street yard, \$529,35. Artificial stone sidewalks, repairs and rebates, \$14,028.82. Asphalt and bitulithic repairs, \$15,291.31. Recutting and redressing old granite blocks, \$3,292.35. Street signs, \$35,941.91.

² Includes artificial stone sidewalks, new and repairs, \$28,405.95. Asphalt and bitulithic repairs, \$32,885.57. Wood block repairs, \$16,121.79.

SCHEDULE A.

EXPENDITURES FOR FISCAL YEAR 1927.

Salary of division engineer (part of)	\$3,750 00
Salaries of office clerks and stenographers	13,993 96
Salaries of assistant engineers (office work)	20,269 32
Salaries of permit office clerks	15,056 50
Salaries of permit office inspectors	19,517 10
Salaries of engineering inspectors (office work)	18,362 52
Salaries of district inspectors	1,855 03
Salary of medical inspector (part of)	400 00
Medical attendance on injured employees (out-side)	461 00
Salary of general foreman	3,054 96
Salary of chief veterinarian (part of)	500 00
Salary of inspector of horses	1,603 29
Salary of constable and inspector	2,239 15
Pensions paid to veterans (retired)	4,893 64
Pensions paid to laborers (retired)	12,284 28
Compensation allowed injured employees	3,446 28
Vacations allowed laborers, mechanics, etc.	38,429 31
Holidays not including holidays charged to street accounts	88,169 49
Military duty	130 00
Postage	207 33
Printing	2,959 22
Stationery	507 65
Traveling expenses, car fares, etc.	1,237 81
Engineering supplies and incidentals	2,110 02
Stationery	\$547 57
Printing	620 87
Postage	102 88
Transit repairs	143 67
Miscellaneous	695 03
Laboratory, salaries, supplies, etc.	1,239 49
Artificial stone sidewalks, new and repairs by department force. (See reconstructing and repairing streets by contract)	28,495 95
Asphalt and bitulithic pavement repairs. Temporary repairs, labor, teaming, materials. (See reconstructing and repairing streets by contract),	32,885 57
Brick block repairs, labor, teaming, materials	488 45
Wood block repairs, labor, teaming, materials	16,121 79
Crosswalks repaired, not included elsewhere	1,155 68
Fence repairs	4,779 09
<i>Carried forward</i>	\$340,603 88

<i>Brought forward</i>						
Plankwalk repairs						\$340,603 88
Edgestone, sidewalks and gutters (new) not included elsewhere						1,717 21
Rent of land, wharves, etc.						18,862 57
Expense of stables, including drivers, feeders, fodder, horse-shoeing, repairs to harnesses, wagons, carts, etc.						2,775 00
Amount earned by department teams					\$138,116 94	
					120,260 13	
<hr/>						
Electric lighting at yards and stables						17,856 81
Gas lighting at yards and stables						1,327 64
Fuel, for heating offices, buildings and stables						321 57
Electric appliances, labor and materials, yards and stables						3,930 26
Rent of towels						149 83
Stoves, pipes, grates, etc.						178 20
Telephone rentals and tolls						50 00
Ice						2,062 04
Signs, making, repairing, putting up, etc.						186 60
Tools, hardware, etc., new, cost of repairing, etc.						31,091 34
Oil for lighting around defects, etc.						39,671 14
Expenses of yards, including salaries of foreman, clerks, yardmen, watchman, tool wagons, etc.,						1,585 16
Repairs of yard buildings, stables, sheds, shanties, etc.						66,143 84
Sanding icy and slippery streets						15,741 36
Chests for Central Office, making of						1,576 91
Premium on surety bonds						120 47
Traverse Street subway						12 00
Placing lanterns on silent policemen						1,477 00
Repairs to and inspection of typewriters and adding machines						4,433 00
Repairs to snow dumps						62 45
Work done and materials furnished individuals, corporations, etc.						1,070 10
Furniture and repairs						5,617 51
Miscellaneous						12 00
Steam rollers; cost of operation, repairs, supplies, etc.					\$25,710 59	1,779 95
Amount earned					20,436 75	
						<hr/>
Work done and materials furnished other services and departments						5,273 84
Buffalo, Springfield steam roller						6,276 79
Asphalt plant, South End District						6,950 00
Automobiles, one Walter truck						8,571 90
						<hr/>
<i>Carried forward</i>						\$596,938 37

<i>Brought forward</i>		\$596,938 37
Stone crusher, South End District, operating supplies, etc.		2,375 43
Garage, Albany street, employees' wages, fuel, gasolene, supplies, repairs, etc.		51,331 71
Garage, Hancock street, employees' wages, fuel gasolene, supplies, repairs, etc.		13,124 60
Total		\$663,770 11

Credits:

Amounts earned by concrete mixers, snow-loaders and tractors		\$13,385 89
Automobiles:		
Amount earned by trucks	\$160,216 13	
Cost of operation, repairs, supplies, equipment	103,217 06	57,099 07
Asphalt plant, Brighton:		
Value of material used on streets	61,573 54	
Operating expenses, repairs, etc.	42,195 94	19,377 60
Stock:		
Materials delivered on streets	\$175,706 55	
Cost of materials	\$106,711 65	
Labor handling and teaming	22,345 06	
	129,056 71	
		46,649 84
		\$136,512 40
Total		\$527,257 71

Snow and Ice Removed by Contract from January 1, 1927, to December 31, 1927.

District.	Contractor.	Number of Loads.	Cubic Yards.	Cost per Cubic Yard.	Total Cost.	Remarks.
1.....	Hugh Nawn, Inc J. J. McCarthy & Co.....	4,405	40,039 $\frac{1}{4}$	\$0 55 55	\$22,021 73	1926 contract. 1927 contract.
2.....	Leo J. Nawn, Inc.....	801	8,308 $\frac{1}{4}$	55	4,569 68	1926 contract. 1927 contract.
2.....	Leo J. Nawn, Inc.....	No work.	.....	55	.....	.....
3.....	B. E. Grant Company.....	2,535	23,629	55	12,995 96	1926 contract. 1927 contract.
3.....	B. E. Grant Company.....	No work.	.....	55	.....	.....
4.....	Coleman Brothers.....	3,348	33,080	60	19,848 00	1926 contract. 1927 contract.
4.....	B. E. Grant Company.....	No work.	.....	60	.....	.....
5.....	Ormac Company.....	3,073	26,262	60	16,757 20	1926 contract. 1927 contract.
5.....	Ormac Company.....	No work.	.....	60	.....	.....
6.....	A. G. Tomassello & Son.....	4,476	38,243 $\frac{1}{4}$	65	25,058 28	1926 contract. 1927 contract.
6.....	A. G. Tomassello & Son.....	No work.	.....	65	.....	.....
7.....	M. F. Gaddis.....	2,548	20,808	50	10,404 00	1926 contract. 1927 contract.
7.....	J. J. Loonie.....	No work.	.....	55	.....	.....
8.....	J. J. McCue Company.....	5,284	46,454 $\frac{1}{4}$	50	23,227 25	1926 contract. 1927 contract.
8.....	J. B. O'Rourke.....	No work.	.....	50	.....	.....
9.....	Coleman Brothers.....	2,360	17,786 $\frac{1}{4}$	60	10,771 90	1926 contract. 1927 contract.
9.....	J. A. Singarella.....	No work.	.....	65	.....	.....
10.....	J. J. McCarthy & Co.....	2,887	26,010 $\frac{1}{4}$	50	13,005 25	1926 contract. 1927 contract.
10.....	D. M. Biggs & Co.....	No work.	.....	50	.....	.....
11.....	D. M. Biggs & Co.....	No work.	.....	F. Acct. 58	.....	1926 contract. 1927 contract.
11.....	E. J. Byrne.....	No work.	.....	58	.....	.....
12.....	James Byrne.....	1,980	16,106 $\frac{1}{4}$	60	9,663 90	1926 contract. 1927 contract.
12.....	A. DeStefano & Son, Inc.....	No work.	.....	54	.....	.....
13.....	Coleman Brothers.....	4,339	38,059	60	22,835 40	1926 contract. 1927 contract.
13.....	No contract.....	.....	.....	.....	.....	.....

The Number of Loads of Snow Removed from January 1, 1927,
to December 31, 1927.

DISTRICT.	Single.*	Double.†	Auto Truck.‡	Cubic Yards.	Cost.§
South Boston.....	954	1,002	3,384	28,822	\$20,158 22
East Boston.....	5,102	2,703	167	19,315	14,537 67
Charlestown.....	2,706	683	782	12,153	17,838 29
Brighton.....			1,974	20,793	20,882 54
West Roxbury.....	588	1,677	3,724	29,199	38,301 72
Dorchester.....	1,194	265	3,178	22,251	23,174 78
Roxbury.....	1,946	612	1,119	17,461	49,291 76
South End.....	168		8,607	74,408	49,804 20
Ashmont.....	5,481	2,508	1,093	23,407	21,351 18
North End.....	287		1,531	12,648	2,826 60
Hyde Park.....	515	735	1,614	6,698	11,043 92
Totals.....	18,941	10,185	27,173	267,155	\$269,210 88

* Single loads, 2 cubic yards.

† Double loads, 3 cubic yards.

‡ Auto truck loads, 3 cubic yards to 14 cubic yards.

§ Includes cost of plowing gutters, cleaning sidewalks and picking ice not carted away.
Also automobile snow plows furnished by contractors.Loads of Dirt and Street Cleaning Removed from January 1,
1927, to December 31, 1927.

DISTRICT.	Single.*	Double.†	Auto Truck.‡	Cubic Yards.
South Boston.....	52	151	868	5,562
East Boston.....	123	61	—	145
Charlestown.....	238	—	—	238
Brighton.....	38	3	4,007	24,086
West Roxbury.....	1,420	3,270	1,458	16,708
Dorchester.....	284	77	305	2,268
Roxbury.....	2,752	1,019	753	9,308
South End.....	—	—	16	96
Ashmont.....	1,639	545	351	4,835
North End.....	—	—	—	—
Hyde Park.....	1,461	224	56	2,245
Totals.....	8,007	5,350	7,814	65,593

* Single loads, 1 cubic yard.

† Double loads, 2 cubic yards.

‡ Auto truck loads, 6 cubic yards.

New Edgestone and Brick Sidewalk Recapitulation for 1927.

DISTRICT.	Edgestone, Linear Feet.	Brick Sidewalk, Square Yards.
South Boston, Paving District, No. 1.....	556	—
East Boston, Paving District, No. 2.....	468	28
Charlestown, Paving District, No. 3.....	80	—
Brighton, Paving District, No. 4.....	1,671	—
West Roxbury, Paving District, No. 5.....	1,303	—
Dorchester, Paving District, No. 6.....	1,928	—
Roxbury, Paving District, No. 7.....	1,331	554
South End, Paving District, No. 8.....	262	—
Ashmont, Paving District, No. 9.....	137	—
North End, Paving District, No. 10.....	—	—
Hyde Park, Paving District No. 11.....	623	—
Totals.....	8,359	582

New Granolithic Sidewalks Laid by Department Forces
During 1927.

DISTRICT.	Square Feet.	Location of Work.
South Boston.....	—	
East Boston.....	—	
Charlestown.....	10,809	Chapman street, Beach street, Lawnwood place.
Brighton.....		
West Roxbury.....	837	St. Joseph street.
Dorchester.....	702	Melville avenue.
Roxbury.....	2,088	Sunnyside street, Tremont street.
South End.....	4,392	Massachusetts avenue, Tremont street.
Ashmont.....	—	
North End.....	—	
Hyde Park.....	—	
Total.....	18,828	

PUBLIC WORKS DEPARTMENT — HIGHWAY DIVISION — PAVING SERVICE.

PUBLIC WORKS DEPARTMENT.

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Maintenance of Macadam Streets.

Cost by Years of Resurfacing or Patching from February 1, 1923, to December 31, 1927.

	1923.	1924.	1925.	1926.	1927.
Total length of macadam in miles.....	351.25	347.63	343.50	340.24	335.62
Total area of macadam in square yards.....	5,926,385	5,789,425	5,708,260	5,629,035	5,563,377
Total cost of resurfacing of macadam *	\$57,883.32	\$40,032.79	\$111,541.74	\$100,246.23	\$119,795.43
Total cost of patching of macadam†	\$196,758.28	\$251,026.22	\$231,916.92	\$305,064.95	\$299,546.48
Cost of resurfacing per mile over entire mileage	\$164.79	\$115.16	\$324.72	\$294.64	\$356.94
Cost of resurfacing per square yard over entire area	\$0.0097	\$0.0069	\$0.0195	\$0.0178	\$0.0215
Length of macadam resurfaced yearly in miles	3.322	1.905	4.939	4.893	6.6506
Cost per mile of macadam resurfaced yearly	\$17,424.23	\$21,014.58	\$22,583.89	\$20,457.64	\$18,012.73
Area of macadam resurfaced yearly in square yards	47,870	27,461	82,648	67,419	89,569
Cost per square yard of macadam resurfaced yearly	\$1.2091	\$1.46	\$1.34	\$1.49	\$1.337
Area of macadam patched yearly in square yards	324,187	452,260	329,801	450,702	479,544
Cost per square yard of macadam patched yearly	\$0.6039	\$0.555	\$0.703	\$0.678	\$0.625
Binders used in resurfacing (per cent):					
Water.....	.0000	.0000	.0000	.0000	.0000
Tax preparation .....	.0000	.0000	.0084	.0000	.0000
Asphalt preparations.....	1.0000	1.0000	.9916	1.0000	1.0000

* By resurfacing is meant entire area of street excavated and resurfaced with not less than four inches of new material.

† By patching is meant scattered areas of depressions, etc., which are filled with new material from a depth of one half inch up, and in some cases blanket coated

398,747 square yards patched; 80,797 square yards asphalt blanket coat.

STREET OPENINGS.

Under classes 1 and 2 of the schedule of permit fees, permits were issued for openings in public ways, as follows:

TO WHOM ISSUED.	Number of Permits.	Length of Feet.
Sewer and Water Service.....	4,132	49,584
Boston Consolidated Gas Company.....	1,778	44,450
Boston Elevated Railway.....	190	28,500
Dedham and Hyde Park Gas Company.....	74	1,850
Edison Electric Illuminating Company.....	3,996	279,720
Miscellaneous.....	3,063	153,150
New England Telephone and Telegraph Company.....	745	55,875
Emergency permits used and returned.....	642	16,050
	14,620	629,179

Making a total length of openings approximately 119 miles.

Total of all permits issued 22,516.

Permits for other than street openings have been issued as follows:

Cleaning snow from roof	15
Erecting and repairing awnings	507
Erecting and repairing buildings	1,236
Driving cattle	2
Painting or minor repairs on buildings	4,059
Moving buildings in streets	13
Feeding horses in streets	25
Placing signs flat on buildings	1,229
Raising and lowering safes etc.	33
Emergency for above	490
Special permits	287
	7,896

The revenue from issuing permits amounted to \$26,997.33.

Of this amount \$20,753.08 was deposited with the City Collector and \$6,244.25 was billed to public service corporations.

BONDS.

There are now on file 2,724 surety bonds, in amount of one, three and twenty thousand dollars, covering the city against claims for damages etc., through the use of permits.

PUBLIC WORKS DEPARTMENT.

HIGHWAY DIVISION PAVING SERVICE - DETAIL OF WORK DONE BY CONTRACT AND CHARGED TO APPROPRIATION "GRANOLITHIC SIDEWALKS."

STREET	From	To	Contractor	Pavement	Length Feet	Area, Square Feet	Total Cost	Amount Paid to Contractor	MATERIALS				EXPENSES				WORK DONE				Progress				
									CONCRETE		CIMENTO		SIDEWALK BRICK		MISCELLANEOUS		Engineering		Inspection		Brick Sidewalk and Paved and Repaired		Roads Paved and Repaired		
									Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Hours	Cost	Yards	Cost	Hours	Cost	Yards	
1	Academy Hill road	Washington street	Charles Struzzers	1,766	5,511	\$1,667.40	\$1,635.27	\$14.00																	Completed August 17, 1927
2	Adin street (south side)	Franklin street	Henry F. Malley		847	1,291.60	729.00																		Completed December 14, 1926
3	Ashley street	Union street			62	84																			Work not completed
4	Austin street (south side)	Carrick street	J. J. McCarthy Company	1,820	1,137	6,946.92	1,221.91	2,490.31	1,567																Completed October 28, 1927
5	Austin street	Adams street			54	68																			Work not started
6	Beech Hill street	Port Avenue			26	26																			Work not started
7	Blue Hill Avenue	Highland avenue			147.88	412.88																			Completed 1927
8	Brown street	At No. 61 and No. 60	John McCarthy Company		880	50	880.00	880.00																	Completed 1927
9	Brooklyn avenue	At No. 61 and Newbury street	Leo J. Nawn Inc.		621.97	621.97																			Completed 1927
		From Brookline avenue																							
10	Carruth street	Adams street	J. J. McCarthy Company		219.10																				April 8, 1927
11	Central avenue	Webster street			152.75																				Work not done
12	Chase street	Union street	The Homes Company		602.600	602.600																			Completed 1927
13	Chestnut Avenue (south side)	Chestnut Avenue	Joseph A. Spangler	1,664	601	3,726.98	1,669.17	1,060.00																	Completed 1927
14	Checkerslot street (south side)	Checkerslot Avenue	Charles Struzzers		152.45																				Completed November 2, 1927
15	Clayton street	Orleans street			276	1,712	388	74.50																	Work not done
16	Cornell street	Adams street	J. J. McCarthy Company		1,971	750	1,944.64	1,241.90	90.45																Work not done
17	Cushing Avenue	At No. 51	John F. Shea & Co.		1,912.10	1,124.15	1,791.96	679																	Completed March 31, 1927
18	DeWolff street	South Avenue	John J. Nawn Inc.		452.75	310.15																			Completed November 22, 1927
19	Diamond street	Elm street	J. J. Tommello		519	2,16	3,174.38	1,606.93	1,132.20	751	\$134.56	12,150													Completed October 6, 1927
20	Elton street	Duxbury Avenue	Henry F. Malley		248.61	226.61																			Work done in 1926
21	Elton street	Elton street	Henry F. Malley		124.00	100.00																			Completed May 18, 1927
22	Elton street	Elton street	Leo J. Nawn Inc.		124.00	100.00																			Work not done
23	Evans street	Elton street	Henry F. Malley		124.00	100.00																			Completed December 23, 1926
24	Fairmount Avenue	In front of No. 31	John F. Shea & Co.		24.19	19																			Work not done
25	Granger street	Elm street	Charles Struzzers		5,34	7,980	1,374.00	1,349.80	1,311.44	1,024														Completed November 2, 1927	
26	Homewood street	Clayton street	Leo J. Nawn Inc.																					Completed 1927	
27	Home Avenue	At No. 26			1,05																				Work not done
28	Home Avenue	At No. 26	John F. Shea & Co.		51	307	57.80	67.35																	Completed November 22, 1927
29	Home Avenue	Washington street	Rosehill street		1,103.62	1,147.12																			Work done in 1926
30	Hilliard street	Hilliard street	Henry F. Malley		448	729.5	3,240.54	1,999.48																	Completed April 27, 1927
31	Hilliard street	Adams street	Charles Struzzers		37	4,434.00	2,027.84	1,692.57	786.21	26														Completed August 20, 1927	
32	Hilliard street	Adams street																						Work done in 1926	
33	Maple street	Maple street	John F. Shea & Co.		1,127	7,010	3,550.40	2,114.00	668.88	198	60.00													Completed November 3, 1927	
34	Maple street	Elm street	Charles Struzzers		1,061	2,131	2,284.97	1,687.87	1,022															Completed November 3, 1927	
35	Newbern street	Elm street	John A. Andrew street		502.08	502.08																		Completed 1927	
36	Oak street (south side)	Maple street	John A. Andrew street		201.00	201.00																		Work done in 1926	
37	Parke street	Adams street	Paul Coleman		856.52	638.20	248.13	200																Completed 1927	
38	Parke street	No. 241 Diamond	Miller Contracting Company		636.27	636.27																		Work done in 1926	
39	Parham street	Duxbury Avenue	John F. Shea & Co.		604.90	584.26																		Completed 1927	
40	Pelham road	Brookline Avenue	J. J. McCarthy Company		125.75	125.75																		Work done in 1926	
41	Pelham road	Adams street	Charles Struzzers		8.00	8.00																		Work done in 1926	
42	Pelham road	Linden street	Adams street		1,142.26	2,392.60	350.84	173																Completed November 12, 1927	
43	Praff street	Ward street	J. J. McCarthy Company		10.00																				Work done in 1926
44	Praff street	Adams street	M. D. Ryan		121.37	406.02																			Completed 1927
45	Praff street	Adams street	The Homes Company		1,024.66	912.00																		Completed in 1927	
46	Roxbury street	St. John street	Henry F. Malley		1,459	17,57	9,435.72	6,431.80	2,878.62	1,884														Completed in 1927	
47	Roxbury road	Washington street	John F. Shea & Co.		1,134	10,710	3,657.45	2,700.00	211.00															Completed April 27, 1927	
48	Seabrook street	Adams street	John F. Shea & Co.		1,625.63	1,524.63																		Completed April 27, 1927	
49	Sedgewick street	Adams street	The Homes Company		263	1,604	425.31	349.15	10.00															Completed in 1927	
50	Sedgewick street	Adams street	John F. Shea & Co.		1,612.61	1,401.61	2,580.89	1,324.29	960														Completed September 24, 1927		
51	Sedgewick street	Charles Struzzers			1,624.75	1,171.38																	Completed October 20, 1927		
52	Sedgewick street	Brookline Avenue	Joseph A. Struzzers																					Completed August 1, 1927	
53	Sedgewick street	Haven & Hartford Railroad	John F. Shea & Co.		676	5,510	1,891.55	650.83	908.23	747														Unfinished	
54	Summer street	East Cottage street	J. J. McCarthy Company		610.00	454.00																		Work done in 1926	
55	Supertree street	Adams street	John F. Shea & Co.		2,672.07	2,689.58	10.00																	Completed October 29, 1927	
56	Taber street (west side)	100 feet west of Union street	J. J. McCarthy Company		1,155	10,730	7,272.00	7,28																Work not started	
57	Thaxter street	Holyoke Avenue	The Homes Company		1,156	10,730	7,272.00	7,28																Completed September 25, 1927	
58	Tuttle street	Saxton Hill Avenue	John F. Shea & Co.		276	1,906	10.00	10.00																Completed October 25, 1927	
59	Washington street	Adams street	The Homes Company		1,699.37	1,171.38	21.87	21.87	2														Completed September 19, 1927		
60	Washington street	Whitfield street	Charles Struzzers		1,699.37	1,171.38	21.87	21.87	2														Completed September 19, 1927		
61	Whitfield street	Washington street	John F. Shea & Co.		188	2,040	500.12	188.62	10.00															Completed November 17, 1927	

Credit, old brick sidewalk, \$11.70

Credit, old brick sidewalk, \$45

Teaming, \$5.50

Credit, old brick sidewalk, \$21

Installing drain

Credit, old brick sidewalk, \$37.50

Teaming, \$120, steam roller, \$117.

PUBLIC WORKS DEPARTMENT.

HIGHWAY DIVISION—PAVING SERVICE—DETAIL OF WORK DONE BY CONTRACT AND CHARGED TO APPROPRIATION "HIGHWAYS" MAKING OF

HIGHWAY DIVISION - PAYMENT VENUE - DETAILS OF WORK DONE BY CONTRACTOR AND CHARGES TO APPROPRIATION - HIGHWAY, MAKING CT.																		
STREET	From	To	Contractor	Pavement	Length, Linear Feet	Area, Square Yards	Total Cost	Amount Paid to Contractor	MATERIALS				EXPENSES				Process	
									FOOTSTONE	GRANITE BLOCK	BIRDFWALL BRICK	MISCELLANEOUS	Cost	Linear Feet	Cost	Quantity	Cost	Quantity
1. Adams street																		
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With $\langle Q(t) \rangle = \langle \sigma(t) \rangle \langle \sigma(t) \rangle^* = \langle \sigma(t) \rangle^2$ and $\langle \sigma(t) \rangle = \langle \sigma(t) \rangle^*$ (because $\sigma(t)$ is real)

1. $\mathbb{E}_{\text{alg}}[\text{alg}]$

Trucks, teams, horses to muck, steam roller.

• Vertical stone sidewall
decorating the site.

PUBLIC WORKS DEPARTMENT.

HIGHWAY DIVISION—PAVING SERVICE—DETAIL OF WORK DONE BY CONTRACT AND CHARGED TO APPROPRIATION "SPECIAL APPROPRIATIONS."

ITEM	DESCRIPTION	CONTRACTOR	PAYMENT	LENGTH, LINEAR FEET	AREA, SQUARE YARDS	TOTAL COST	AMOUNT PAID TO CONTRACTOR	MATERIALS				EXPENSES				WORK DONE				PROGRESS		
								BRICKSTONE		GRANITE BLOCKS		SIDEWALK BRICKS		MISCELLANEOUS		FURNISHINGS		LABOR		MATERIALS		
								Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity			
1	Cambridge and Court streets					\$9,204.16		875.16		\$95.50	29,050	\$42.00	95,000	\$5794.56	\$93.14			\$14,718.16			1	
2	Causeway, Lowell and Nashua streets					57.95									\$7.95						2	
3	Department of equipment					412,454.00															3	
4	Dock square and Leland Hall street improvement																				4	
5	Forge, Hancock Street, Yards																				5	
6	Inchend street improvement																				6	
7	Morton street improvement	Cambridge street	Moderator	Joseph A. Suganis	Excavation and surface grading	3,511	22,201.11	19,201.25								1,063.39	782.48	61.96	9.25	34	7	
8	Oakland and Ashland streets			William J. Barry	Rubble wall	4,500	26,400	19,752.51	14,863.75							1,266.05	555.89	73.37	7.75	400	8	
9	River street					6,900	32,100	5,840.85	4,250.00							1,442.40	88.53	5.20	1.75		9	
10	Street signs															24,052.65	2,358.01	338.03	7.95	*8,318.36		10
11	Trumont street improvement	Street street	Bridge over Union A. Albany Bridges			3,453.98	2,431.73	7.17								148.66	353.90	60	333.52		11	

Sand stone, etc.

*Labor, excavating, paving, grading, etc.

**Trucks, trunks, etc. for moving steam roller, etc.

*1 Mack service wrecker, \$8,094

*2 Barber-Greene snow blower, \$16,236

*3 Mac-Morrison tractor with Walsh plow, \$17,400

*4 Credit, old sidewalk bricks.

*5 Photographs

*6 Expert service, \$307.91, trucks, \$750

DETAIL OF WORK DONE BY HIGHWAY DIVISION—PAVING SERVICE FORCE

STREET	From	To	Total Cost ¹	WORK DONE.												COST OF LABOR.			
				Square Yards	Yards	Yards	Yards	Yards	Yards	Yards	Yards	Yards	Yards	Yards	Yards	Yards	Yards	Yards	Yards
1 Aldine street	Franklin street	Everett street	\$3,197.26	2,688	5														
2 Alveston street and Bonanno avenue	Seaview avenue	Revere street	5,655.62	490	4														
3.1. Ashton street	Adams street	Carrall street	2,329.44	1,204	3														
4.1. Adams street	Adams street	Neck street	3,012.46	2,780	4														
5.1. Astor street	Gordon avenue	West street	300.62																
6.1. Bennett street	Market street	Market street west of Parsons street	3,425.13	66															
7.1. Boston street	West street	Parsons street	5,409.32	2,057	6														
8.1. Cambridge street	Boston & Albany Railroad	Charles street																	
9.1. Capen street	Norfolk street	Maxwell street	2,425.39	2,062	4														
10.1. Chapman street	Main street	Matthew street	1,243.29	975	4														
11.1. Church street	Huntington street	Charles street	2,496.56	2,500	4-5														
12.1. Columbus avenue, Providence street	Widgery street	Around State Hotel	11,414.58																
13.1. Franklin street and Wiggin street	Cox's street	Widgery street	349.60																
14.1. Coxey street	Dugdale street	Widgery street	2,651.60	2,650	4														
15.1. Davis street	Dudley street	Widgery street	2,955.80	2,181	4														
16.1. Devens street	Dudley Hill	Widgery street	2,568.80	3,412	5														
17.1. Dixie street	West street	Widgery street	2,368.88	5,421	4-5														
18.1. Elm street	West First street	Widgery street	2,284.63	5,421	3-23														
19.1. E street	West Broadway	Widgery street	2,284.63	5,421	3-23														
20.1. Elm Village street	West First street	Widgery street	2,027.56	7,000	3														
21.1. Elm East street	Charles street	Putnam street	2,758.16	3,168	3														
22.1. Elm street	Putnam street	Putnam street	2,042.11	250	4														
23.1. Elm street and New Way	Water street	Putnam street	1,302.00	1,060	4														
24.1. Gordon street	Putnam street	Putnam street	93.65																
25.1. Gordon street	Cambridge street	Pomona street	789.00	1,040	1														
26.1. Gordon street	Cambridge street	Adams street	5,200.00	1,770	4														
27.1. Greenough avenue	Centre street	Elm street	1,563.85	1,985	2-3														
28.1. Half Moon street	Magnolia street	Langford street	2,815.60	1,175	3-4														
29.1. Hallowell street	Washington street	Washington street	3,161.50	5,501	6														
30.1. Harrington street	Washington street	Humboldt avenue	11,861.40	6,811	6														
31.1. Haverhill street	Washington street	Metropole station	1,017.70																
32.1. Haverhill street	Washington street	Metropole station	1,017.70																
33.1. Haverhill street	Washington street	Rosecliff street	5,703.69	5,790	5														
34.1. Haverhill street	Washington street	Rosecliff street	3,630	450	4														
35.1. Haverhill street	Washington street	Rosecliff street	4,697.11	3,048	5														
36.1. Haverhill street	Washington street	The Riverview	1,749.06	1,066	5														
37.1. Haverhill street	Washington street	Washington street	3,041.00	3															
38.1. Marion street	Maple street	Washington street	2,627.01	2,022	3														
39.1. Marion street	Maple street	Washington street	2,627.01	2,022	3														
40.1. Marion street	Maple street	Washington street	5,512.56	7,442	3														
41.1. Marion street	Maple street	Washington street	1,292.02	2,340	4														
42.1. Marion street	Maple street	White street	About 350	50 ft southwesterly															
43.1. Marion street	Maple street	White street	5,512.56	7,442	3														
44.1. Marion street	Maple street	White street	5,512.56	7,442	3														
45.1. Marion street	Maple street	White street	1,292.02	2,340	4														
46.1. Northern avenue	Commonwealth avenue	Commonwealth avenue	1,544.00																
47.1. Old Harbor street	Dovercourt street	Leggat street	2,172.94	1,558	1														
48.1. Old Harbor street	Dovercourt street	Leggat street	2,172.94	944	1														
49.1. Parsons street	Washington street	Neck street	1,104.28																
50.1. Pond street	Washington street	James street	2,720.30	2,311	4-5														
51.1. River street	Washington street	Washington street	81.25																
52.1. River street	Washington street	Washington street	5,830.47	4,885	4														
53.1. River street	Washington street	Washington street	5,830.47	4,885	4														
54.1. River street	Washington street	Washington street	6,070.28	2,278	5														
55.1. Slocum street	Parke Hill avenue	Washington street	2,840.68	2,745	5														
56.1. Slocum street	Parke Hill avenue	Washington street	5,339.20	3,214	5														
57.1. School street	Walnut street	Washington street	3,839.20	3,214	5														
58.1. School street	Walnut street	Washington street	3,839.20	3,214	5														
59.1. School street	Walnut street	Washington street	3,839.20	3,214	5														
60.1. Stanwood street	Blue Hill avenue	Columbus road	4,823.89	4,105	4														
61.1. Stanwood street	Blue Hill avenue	Columbus road	4,823.89	4,105	4														
62.1. Stanwood street	Blue Hill avenue	Columbus road	4,823.89	4,105	4														
63.1. Stanwood street	Blue Hill avenue	Columbus road	4,823.89	4,105	4														
64.1. Stanwood street	Blue Hill avenue	Columbus road	4,823.89	4,105	4														
65.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
66.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
67.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
68.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
69.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
70.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
71.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
72.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
73.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
74.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
75.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
76.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
77.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
78.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
79.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
80.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
81.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
82.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
83.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
84.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
85.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
86.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
87.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
88.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
89.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
90.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
91.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
92.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
93.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
94.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
95.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
96.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
97.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
98.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
99.1. Virginia street	Dury's street	Bird street	1,734.93	3,055	4														
100.1. Virginia street	Dury's street	Bird street	1,734.93	3,055															

RECE—CHARGED TO APPROPRIATION FOR MAINTENANCE—PAVING SERVICE.

References

Driveway (block) remained.

Asphalt paving (square yards).

Cost of asphalt paving.

13 Cost of asphalt cement (3 ton)

Work done in 1926.

Cost of wood block paving.

PUBLIC WORKS DEPARTMENT.

BIGHIGH DIVISION PAVING SERVICE DETAIL OF WORK DONE BY CONTRACT AND CHARGED TO APPROPRIATION "RECONSTRUCTING AND REPAIRING STREETS BY CONTRACT"

- New artificial stone sidewalks constructed
- Labour cutting blocks
- Credit, old bricks
- Credit, old bricks
- Credit, old blocks

- 11 Labor and photographs
- 12 Credit, brick old, sidewalk
- 13 Credit, bricks old, sidewalk
- 14 Linear feet of fence.
- 15 Labor, teams, trucks, etc.

PUBLIC WORKS DEPARTMENT.

HIGHWAY DIVISION—PAVING SERVICE—DETAIL OF WORK DONE BY CONTRACT AND CHARGED TO APPROPRIATION "PERMANENT STREET PAVEMENT."

STREET	From	To	Contractor	Pavement	Length, Linear feet	Area, square yards	Total Cost	Amount Paid to Contractor	MATERIALS				EXPENSES				WORK DONE				Miscellaneous	Pavement				
									CONCRETE		BRICK		WOOD WALK. BORDER		MISCELLANEOUS		Inspection		Traveling, etc.		Advertisement		Excavation, Earth and Filling			
									Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Linear feet	Square Yards	Linear feet	Square Yards
1 Ainsworth street	Centre street	South street	J. J. McCarthy & Co.	Re-paving artificial stone v. II	511	1,286	\$1,166.94	\$1,166.94									\$59.76	\$31.60	\$2.50	\$13.00		1,210	421	4,957	Completed October 8, 1927.	1
2 Arch street	Milk street	Franklin street															30.00								Work done and paid for by Electric Illuminating Company.	2
3 Andale street	South street	Centre street	J. J. McCarthy & Co.	Re-paving artificial stone v. II	1,528	3,530	\$1,166.94	\$1,166.94	3,105.73	\$19.75							90.35	73.26	4.40			2,113	853	12,619	Completed November 2, 1927.	3
4 Beacon street	At junction with Commonwealth Avenue		J. J. McCarthy & Co.	Re-paving artificial stone v. II																					Work done in 1927.	4
5 Boylston street	Beach street	Later street	John McCourt Company	Pavement	1,572	3,280	41,512.80	41,512.80	11,011.50	91.21						696.65	282.20	18.65	10.00		1,846	100	11,581	Completed October 2, 1927.	5	
6 Boylston street	Brattle street	John McCourt Company	Pavement	800	1,681	1,670.67	1,670.67	18,641.03								403.51	201.20	23.75			104	787	1,157	Completed October 27, 1927.	6	
7 Boylston street	Charles street	John McCourt Company	Pavement	900	1,691	11.40	11.40	70	11,116.70															Completed October 27, 1927.	7	
8 Brattle street	Washington street	13. West street	John McCourt Company	Re-paving v. II	12	163	1,028.25	1,028.25	78,862.90							34.77	18.46	2.75						Completed November 16, 1927.	8	
9 Columbus avenue	Dartmouth street	Northampton street	J. J. McCarthy	Slab	10	18	81.17	81.17	78,862.90							1,260.56	185.92	32.55	1.88				Completed November 13, 1927.	9		
10 Cornhill	Washington street	10. Court of Scrivener's Inn	Samuel J. Tonello	Re-paving v. II	10	18	1,111.00	1,111.00	2,292.80							1,150.00	214.00						Completed November 16, 1927.	10		
11 Dunne street	North Charles street	Franklin street	M. F. Taddeo	Slab	8.50	12.50	1,105.10	1,105.10	107.20							230.82	71.62	2.60	1.50		2.55	121	Completed November 16, 1927.	11		
12 East Broadway	Franklin street	Franklin street	John McCourt	Re-paving v. II	7.75	15.60	1,105.10	1,105.10	107.20							646.00	162.75	21.70	1.50		189	121	15,002	Completed December 3, 1927.	12	
13 East and West Broadband streets	Washington street	All on street	Samuel V. Sangarelli	Re-paving	50.00	100.00	10.30	10.30	29,926.10	81.09						609.00	200.00	22.95	9.75		161	50.00	98	10,060	Completed November 2, 1927.	13
14 Flint street	Warren Avenue	Shawmut Avenue	Samuel V. Sangarelli	Re-paving	5.00	10.00	10.30	10.30	29,926.10	81.09						255.39	203.56	10.65	2.85		4,628			Completed November 28, 1927.	14	
15 Franklin street	Centre street	Franklin street	M. T. Goulds	Slab	1,772	4,040	10,305.08	10,305.08	9,892.45						255.71	11.92	1.40			100	3,368		Completed October 28, 1927.	15		
16 Federal street	Centre street	Franklin street	J. J. McCarthy & Co.	Re-paving artificial stone v. II	10.00	18.74	1,001.60	1,001.60	19.90						302.57	234.80	15.10	8.50		281			Work not done.	16		
17 Fletcher street	South street	South street	J. J. McCarthy & Co.	Re-paving artificial stone v. II	1.50	2.75	2,247.17	2,247.17	2,211.10						72.58	63.50	1.40			767	377	6,618	Completed October 22, 1927.	17		
18 Faneuil street	11. Court of Scrivener's Inn	11. Court of Scrivener's Inn	Samuel J. Tonello	Re-paving v. II	2.00	3.50	8,891.75	8,891.75	204.33	1,414.02	1,270	7,940.50	265.50	183.00	10,300	1,67.55	1,074.44	36.75	9.00		23	3,201	1,145	9,004	Unfinished.	18
19 Harold street	11. Court of Scrivener's Inn	11. Court of Scrivener's Inn	Samuel J. Tonello	Re-paving v. II	2.00	3.50	8,891.75	8,891.75	204.33	1,414.02	1,270	7,940.50	265.50	183.00	10,300	1,67.55	1,074.44	36.75	9.00		23	3,201	1,145	9,004	Completed November 21, 1927.	19
20 Henniker Avenue	Warren Avenue	Warren Avenue	M. F. Taddeo	Slab	1.00	1.00	28,546.02	28,546.02	26,012.76						1,057.00	400.18	29.80	8.50		3,463	20	10,876	Completed November 21, 1927.	20		
21 James street	Warren Avenue	Warren Avenue	M. F. Taddeo	Slab	1.00	1.00	1,001.00	1,001.00	2,994.00						73.90	15.50	4.15	4.87		1,04			Completed November 2, 1927.	21		
22 Longmeadow Avenue	Longmeadow Avenue	Longmeadow Avenue	John V. Sangarelli	Re-paving	1.00	1.00	1,001.00	1,001.00	2,994.00											563	563	1,042	Completed October 29, 1927.	22		
23 Montpelier Avenue	Center street	Montpelier Avenue	J. J. McCarthy & Co.	Re-paving v. II	1.00	1.00	19,436.18	19,436.18	10,762.00	10,22						302.57	234.80	15.10	8.50		5,370	74	17,485	Completed October 15, 1927.	23	
24 Parker road	Franklin street	Franklin street	J. J. McCarthy & Co.	Re-paving artificial stone v. II	1,000	6,618	1,791.00	1,791.00	1,626.00	20.50						72.58	63.50	1.40			767	377	6,618	Work not started.	24	
25 Quincy street	Berry street	Berry street	Joseph A. Sangarelli	Slab		10.00			16.00						16.00								Completed November 28, 1927.	25		
26 Franklin street	Franklin street	Franklin street	John V. Sangarelli	Slab	800	2,146	9,611.18	9,611.18	8,011.41						357.00	194.65	14.00	8.75		2,766	877		Completed November 30, 1927.	26		
27 Franklin street	Franklin street	Franklin street	John V. Sangarelli	Slab	210	5.00	1,270.75	1,270.75	1,007.07						71.00	23.18	2.30	2.84		500			Work not done.	27		
28 Seelye street	Seelye street	Seelye street	J. J. McCarthy & Co.	Re-paving artificial stone v. II	1,000	6,000	1,275.80	1,275.80	1,046.85						65.11	30.04	1.80			1,254		5,992	Completed November 5, 1927.	28		
29 Shefield road	Walter street	Seelye street	J. J. McCarthy & Co.	Re-paving artificial stone v. II	700	6,786	1,211.51	1,211.51	1,062.56	100.44						65.11	44.25	2.12			432	6,383		Completed November 1, 1927.	29	
30 Stoughton street	Chestnut street	Walter street	J. J. McCarthy & Co.	Re-paving artificial stone v. II	700	6,786	1,211.51	1,211.51	1,062.56	100.44						49.00	49.00	4.40						Work not done.	30	
31 Washington Avenue	Bartonsville street	Chestnut street	C. M. Culhane Incorporated	Re-paving	1,000	2,707	11,817.27	11,817.27	11,450.83	14.72						150.39	117.32	4.90	8.00		431	100	2,707	Completed September 7, 1927.	31	
32 Washington Avenue	Walter street	Chestnut street	C. M. Culhane Incorporated	Re-paving	1,000	17.72	1,128.10	1,128.10	1,111.97	15.12						156.07	169.98	6.00	8.00		432	17.72	1,054	Completed October 5, 1927.	32	
33 Washington street	Franklin street	Franklin street	C. M. Culhane Incorporated	Re-paving	1,000	2,507	7,110.81	7,110.81	6,916.52	114.76						1,602.35	1,299.74	15.40	8.00		400	2,507	20.216	Unfinished.	33	
34 Washington street	Franklin street	Franklin street	Samuel J. Tonello	Re-paving	1,000	1,171	1,010.20	1,010.20	972.15						1,012.60	1,012.60	4.35	8.75		1,445			Completed November 16, 1927.	34		

*Credit, bricks, old sidewalks.

†Credit, blocks.

*Labor and photographs.

‡Liner.

*Labor and photographs.

‡Liner.

APPENDIX D.

REPORT OF THE DIVISION ENGINEER OF THE SANITARY DIVISION.

BOSTON, January 1, 1928.

MR. JAMES H. SULLIVAN,
Commissioner of Public Works:

DEAR SIR,— I submit herewith a statement of the activities and expenditures of the Sanitary Division for the year ending December 31, 1927.

The maintenance expenditures of the Sanitary Division follow:

Sanitary Division	<u>\$3,202,538 52</u>
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SANITARY SERVICE.

This service during the year has shown a marked improvement in the various districts. All complaints have been promptly investigated and the results are fairly shown in the small number of complaints as compared with the number received in previous years.

While the problem of the shortage of available dumping facilities within economic haul is growing more acute each year, and the suburban districts are growing at an amazing rate, we have been able to show a marked improvement in the collections.

One of the problems that we have had to contend with is that of having the householder provide proper receptacles. This has been a great handicap in the proper collection of both ashes and garbage and a matter that will have to be adjusted in the near future.

STREET CLEANING SERVICE.

The purchase of the new motor-driven pick-up sweepers added to the equipment for street cleaning has made it possible to cover a much larger area in the suburban districts. However, the parking of the automobiles next to the curb still adds to the difficulty in cleaning

the streets, and between the parking and the traffic interruptions the situation at the present time presents a serious problem.

During the last two years another problem has presented itself, that of taking care of the old abandoned automobile chassis left on public streets and in public alleys. These bodies become very unsightly and have to be removed, adding another problem to the work of this department.

Yours respectfully,

E. F. MURPHY,
Division Engineer.

SANITARY SERVICE.

FINANCIAL STATEMENT.

Appropriation	.\$3,197,491	43
Transferred from other appropriations	5,037	09
		<hr/>
	\$3,202,528	52
Expended by Sanitary Service,	\$2,089,907	75
Expended by Street Cleaning and Oiling Service	1,112,620	77
		<hr/>
	\$3,202,528	52

INCOME.

Statement showing the amount of bills and cash deposited with the City Collector from February 1, 1927, to December 31, 1927, and credited to General Revenue.

Tickets and bills for the removal of ashes and waste	\$95,182	95
Sale of manure	2,804	70
Rents	525	75
Sale of old material	4	00
Damage to wagon	12	00
Penalty on coal	1	39
		<hr/>
Total	\$98,530	79

AMOUNT PAID INTO THE CITY TREASURY DURING THE YEAR.

Removal of ashes and waste	\$95,182	95
Sale of manure	2,138	78
Rents	525	75
Miscellaneous	17	39
		<hr/>
Total	\$97,864	87

Total Cost of House Dirt, Waste, Rubbish and Offal, 1927.

Salaries, division engineer, supervisor, chief veterinary and medical inspector	\$6,651	35
Office supplies and expenses	4,060	13
		<hr/>
Carried forward	\$10,711	48

<i>Brought forward</i>		\$10,711 48
Ashes, waste and rubbish account		1,348,583 50
House offal account		621,733 15
Retired veterans' pensions	\$1,986 76	
Retired laborers' pensions	4,928 00	
		<u>6,914 76</u>
Total		\$1,987,942 89

CONSTRUCTION REPAIRS AND HORSESHOEING
ACCOUNT.

Expended for labor	\$97,129 92
Expended for stock	32,382 87
	<u>129,512 79</u>

WORK DONE FOR OTHER SERVICES

Street Cleaning Service	27,547 93
Total	<u>\$2,089,907 75</u>

Items of Expenditure for the Year 1927.

Salary, division engineer (in part).....	\$2,500 00
Salary, supervisor (in part).....	1,750 00
Salary, medical inspector (in part).....	1,158 35
Salary, chief veterinary (in part).....	1,250 00
Salary, foremen.....	19,751 29
Salaries, yard clerks.....	2,797 14
Labor, collecting and disposing of house dirt and ashes.....	704,620 14
Labor, collecting and disposing of waste and rubbish.....	38,612 33
Labor, collecting and disposing of house offal.....	358,230 72
Labor and stock at stables and yards.....	103,748 02
Hired teams on ashes.....	26,102 40
Contractor on ashes, East Boston, Brighton, West Roxbury, Dorchester and Hyde Park.....	280,623 36
Contractor on offal, East Boston, Brighton, West Roxbury, Dorchester and Hyde Park.....	130,200 00
Holidays, pay allowed.....	117,872 16
Vacations, pay allowed.....	29,027 10
Grain.....	15,221 07
Hay and straw.....	19,411 14
Medical attendance and pay allowed injured employees.....	9,903 84
Veterinary services and medicine.....	321 39
Horses, draught.....	1,050 00
Outside wheelwright, blacksmith, horseshoeing, etc.....	16,575 89
Labor, stock and wheelwright, blacksmith, painting, etc.....	108,914 26
Repairs to stables and sheds.....	33,678 38
Fuel.....	2,769 54
Gas.....	495 12
Electric light and power.....	2,934 38
Printing, stationery, office supplies, advertising.....	4,060 13
Automobile expenses.....	46,565 70
Rent.....	1,980 00
Tolls and fares.....	45 20
Telephone tolls and rentals.....	823 94
Retired veterans' pensions.....	1,986 76
Retired laborers' pensions.....	4,928 00
Total.....	\$2,089,907 75

Amount Expended for the Collection and Disposal of Ashes, Garbage, Waste and Rubbish, by Districts, 1927.

Districts.	Population.	ASHES.		GARBAGE.		WASTE AND RUBBISH.		Total Cost.	Total Cost Per Capita.
		Cost.	Per Capita.	Cost.	Per Capita.	Cost.	Per Capita.		
1. South Boston.....	73,162	\$86,590 13	\$1.1383	\$36,372 72	\$0.4971	\$225 00	\$0.0031	\$123,196 85	\$1.6839
2. East Boston.....	67,612	44,302 80	0.6565	12,389 96	0.1829	.....	.....	56,762 85	0.8395
3. Charlestown.....	39,047	55,623 79	1.4245	10,573 04	0.2709	.....	.....	66,196 83	1.6853
4. Brighton.....	49,694	53,476 60	1.0761	27,996 61	0.5634	.....	.....	\$1,473 21	1.6394
5. West Roxbury.....	61,170	60,064 34	0.9999	35,563 23	0.5811	.....	.....	95,627 57	1.5633
6. Dorchester.....	162,540	167,371 78	1.0297	92,682 29	0.5702	.....	.....	260,054 07	1.5899
7. Roxbury.....	120,275	186,165 48	1.4401	96,272 94	0.7447	11,922 29	0.0929	294,360 71	2.2770
8 and 9. South End and Back Bay.....	118,216	274,674 58	2.3235	89,491 84	0.7612	38,561 11	0.3262	403,227 53	3.4109
10. North and West Ends.....	75,020	149,911 70	1.9984	33,308 60	0.4439	12,512 46	0.1667	195,732 76	2.6087
11. Hyde Park.....	20,407	11,996 69	0.5877	5,290 26	0.2577	.....	.....	17,236 95	0.8456
12. Disposal station.....	.....	181,526 15	.....	181,341 66	.....	5,711 40	.....	368,579 21	.....
Totals.....	796,152	\$1,271,803 13	.....	\$621,733 15	.....	\$68,932 26	.....	\$1,962,468 54	.....

House Dirt and Ashes Removed.

YEARS.	Loads.	Cubic Yards.	Tons.
1923 *	280,448	1,065,625	434,234
1924 *	276,818	1,099,636	448,094
1925 †	239,840	984,287	401,087
1926	232,670	1,035,160	421,828
1927	182,658	1,140,579	464,787

House Offal Removed.

YEARS.	Loads.	Cubic. Yards.	Tons.
1923 *	50,115	127,052	74,962
1924 *	50,584	142,822	84,264
1925 †	46,093	137,597	81,176
1926	48,738	161,551	95,315
1927	46,002	183,110	108,034

Waste and Rubbish Removed.

YEARS.	LOADS.		Cubic Yards.	Tons.
	Paper Carts.	Market Wagon.		
1923 *	1,924	4,589	53,409	6,394
1924 *	1,901	4,601	53,443	6,390
1925 †	1,772	4,192	47,712	5,851
1926	1,783	4,438	49,768	6,131
1927	1,722	4,068	46,320	5,681

Loads of Material Collected.

YEARS.	Ashes.	Offal.	Rubbish.	Total Loads.	Tons.
1923 *	280,448	50,115	6,513	337,076	515,590
1924 *	276,818	50,584	6,502	333,904	538,748
1925 †	239,840	46,093	5,964	291,897	488,114
1926	232,670	48,738	6,221	287,629	523,274
1927	182,658	46,002	5,790	234,450	578,502

* During the years 1923 and 1924 the financial year was from February 1 to January 31 of next year.

† 11 months.

Collected by Contract.

DISTRICTS.	ASHES.				OFFAL.				TONS.
	Double Loads.	Auto Loads.	Cubic Yards.	Tons.	Single Loads.	Double Loads.	Auto Loads.	Cubic Yards.	
East Boston.....	8,340	2,286	64,060	26,104	.....	1,129	.....	3,952	2,332
Brighton.....	.....	6,132	61,320	24,988	.....	3,991	.....	22,354	13,189
West Roxbury.....	5,698	56,980	23,219	.....	.....	1,310	13,100	7,729	
Dorchester.....	24,786	10,069	224,620	91,533	1,164	6,214	35	24,427	14,412
Hyde Park.....	3,698	79	19,280	7,857	.....	826	.....	2,478	1,462
Totals.....	36,824	24,214	426,260	173,701	1,164	12,160	1,345	66,311	39,124

Summary.

MATERIAL.	Cubic Yards.	Tons.
Ashes.....	426,260	173,701
Offal.....	66,311	39,124

Final Disposition of All Material in Loads and Tons (2,000 Pounds). Collected by the Sanitary Service, January 1, 1927, to December 31, 1927.

CLASS OF REFUSE.	COLEMAN DISPOSAL COMPANY.		COLLECTED AND DISPOSED OF BY CONTRACTORS.		Total Loads.	Total Tons.
	Loads.	Tons.	Loads.	Tons.		
House dirt and ashes.....	145,834	291,086	36,824	173,701	182,658	464,787
Offal.....	41,255	83,322	4,747	24,712	46,002	108,034
Waste and rubbish.....	5,790	5,681	.....	.....	5,790	5,681
Totals.....	192,879	380,089	41,571	198,413	234,450	578,502

Cost of Collections and Disposal of Refuse by Contract in the City of Boston for the Year 1927.

Contract Districts and Population.	Character of Refuse.	Tons (2,000 lbs.)	Total Tons, Cost per Ton by Districts; Collection and Disposal.	Cost per Districts.		Where Disposed of.
				Cost.	Total Cost.	
2., (67,612) . . .	Mixed refuse, principally ashes (no kitchen wastes)	26,104	\$1.7006	\$44,392.89	.....	Inland dumps.
	Garbage, principally kitchen wastes . . .	2,332	5.7333	12,369.96	\$56,762.85	\$0.8395
4., (49,634) . . .	Mixed refuse, principally ashes (no kitchen wastes)	28,436	Av. \$1.9962	.....	.....	*
	Garbage, principally kitchen wastes . . .	24,988	\$2.1101	\$53,476.60	.....	Inland dumps.
5., (34,040) . . .	Mixed refuse, principally ashes (no kitchen wastes)	13,189	2.1228	27,996.61	.....	Inland dumps.
	Garbage, principally kitchen wastes . . .	38,177	Av. \$2.1341	81,473.21	1,6394	*
6., (162,740) . . .	Mixed refuse, principally ashes (no kitchen wastes)	23,219	\$1.3676	\$31,756.12	.....	Inland dumps.
	Garbage, principally kitchen wastes . . .	7,729	30.948	2.4497	18,929.06	1,4889
11., Hyde Park . . . (20,407)	Mixed refuse, principally ashes (no kitchen wastes)	91,535	Av. \$1.6377	\$177,371.78	.....	Coleman Disposal Co. [†]
	Garbage, principally kitchen wastes . . .	14,412	105.945	7.4717	107,682.29	285,054.07
334,293	Mixed refuse, principally ashes (no kitchen wastes)	7,857	Av. \$2.6914	\$1.5268	\$11,946.69	.....
	Garbage, principally kitchen wastes . . .	1,462	9.319	3.5900	5,260.26	0.8456
	Totals . . . . .	.....	212,825	Av. \$1.8518	17,256.95	Inland dumps.
					\$191,233.26	\$1.4614
						*

* Removed beyond city limits and presumably fed to swine.

[†] Contract for disposal.

Total as above.

Add total of day labor table (between pages 114 and 115)

Net amount of appropriation

\$491,232.26

1,598,675.49

\$2,080,907.75

Cost of Collection and Disposal of Refuse by Day Labor Force in the City of Boston for the Year Ending December 31, 1927.

Districts and Population.	Character of Refuse.	Cost per Ton by Districts.					Cost of Districts.					Where Disposed of.
		Tons (2,000 lbs.)	Total Tons.	To Collect.	For Disposal.	Total Collection and Disposal.	To Collect.	Total Cost to Collect.	For Disposal.	Total Cost of Disposal.	Total Cost of Collection and Disposal.	
1 (73,162)	Mixed refuse, principally ashes (no kitchen wastes)	43,113	.....	\$2 0775	\$0 0355	\$2 1130	\$89,569 13	.....	\$1,530 00	.....	.....	Coleman Disposal Company.
	Garbage, principally kitchen wastes,	5,214	.....	7 2636	.....	7 2636	37,872 72	.....	.....	.....	.....	Coleman Disposal Company.
	Store refuse, principally paper,	51	48,378	4 4117	.....	4 4117	223 00	\$127,606 85	.....	1,530 00	\$129,126 85	\$1 7639
3 (39,047)	Mixed refuse, principally ashes (no kitchen wastes)	22,382	.....	\$2 1684	\$0 4508	\$2 6192	48,534 29	.....	10 089 50	.....	.....	Coleman Disposal Company.
	Garbage, principally kitchen wastes,	4,204	26,586	2 7528	.....	2 7528	11,573 04	.....	60 107 33	10 089 50	70 196 83	1 7975
	Store refuse, principally paper,	771	130,688	Av. \$2 6404	Av. \$0 4508	Av. \$3 0912	.....	.....	.....	.....	.....	.....
5 (part) and 7 (156,405)	Mixed refuse, principally ashes (no kitchen wastes)	94,185	.....	\$2 9750	\$0 0022	\$2 9781	\$280,291 83	.....	\$213 15	.....	.....	Coleman Disposal Company.
	Garbage, principally kitchen wastes,	35,729	.....	3 4399	.....	3 4399	122,007 66	.....	.....	.....	.....	Coleman Disposal Company.
	Store refuse, principally paper,	771	130,688	15 4939	.....	15 4939	11,922 29	.....	413,121 78	213 15	413,334 93	2 6335
8 and 9 (118,216)	Mixed refuse, principally ashes (no kitchen wastes)	80,491	.....	\$3 5179	\$0 0683	\$3 5562	\$283,160 47	.....	85,501 25	.....	.....	Coleman Disposal Company.
	Garbage, principally kitchen wastes,	16,707	.....	6 4165	0 1670	6 5835	107,201 84	.....	2,798 00	.....	.....	Coleman Disposal Company.
	Store refuse, principally paper,	3,561	100,759	10 8287	.....	10 8287	38,561 11	.....	427,923 12	8,291 25	437,214 69	3 6984
10 (75,029)	Mixed refuse, principally ashes (no kitchen wastes)	50,915	.....	83 0523	.....	83 0523	\$154,411 15	.....	.....	.....	.....	Coleman Disposal Company.
	Garbage, principally kitchen wastes,	7,056	.....	4 9332	.....	4 9332	34,808 60	.....	.....	.....	.....	Coleman Disposal Company.
	Store refuse, principally paper,	1,295	59,266	9 6621	.....	9 6621	12,512 46	.....	8201,732 21	.....	8201,732 21	2 6887
	Coleman Disposal Company,			Av. \$3 4039	.....	Av. \$3 4039	.....	.....	.....	345,000 00	345,000 00	.....
461,559	Totals		365,677	Av. \$3 3732	Av. \$0 0981	Av. \$4 3711	.....	\$1,233,551 59	.....	\$365,123 90	\$1,598,675 49	\$3 4014

* The amount paid to Coleman Disposal Company is for disposal of all refuse collected by the city force and Dorchester contracts, District 6 on page 114.

Total as above..... \$1,598,675 49

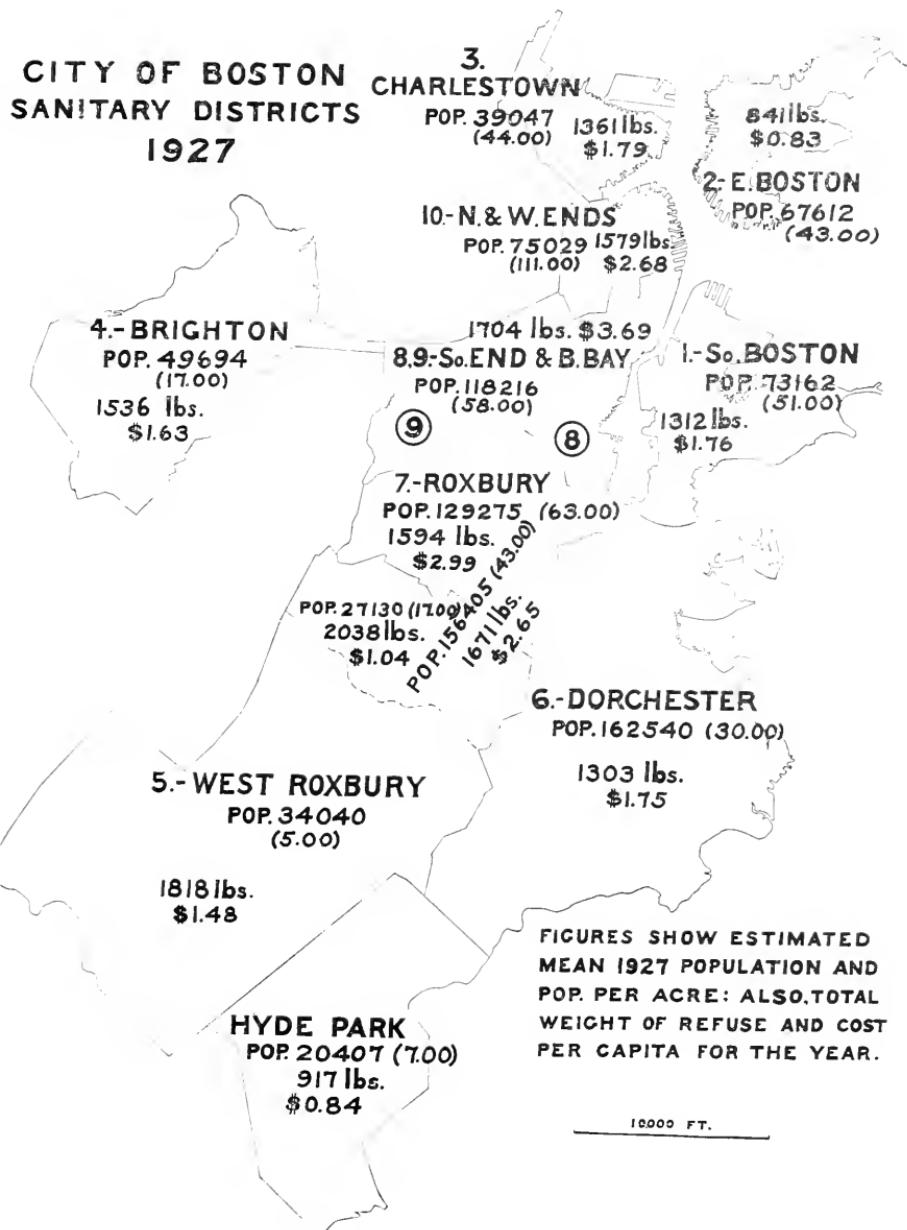
Add total of contract table, page 114 491,232 26

Net amount of appropriation..... \$2,089,907 75

Coleman Disposal Company's contract calls for \$345,000 per year.

Details of Collected Refuse in Boston for the Year Ending December 31, 19

**CITY OF BOSTON
SANITARY DISTRICTS
1927**



**SANITARY DIVISION.—STREET CLEANING
DIVISION.**

General administration:

Salary division engineer (in part)	.\$2,374 99
Salary, deputy supervisor	3,500 00
Pensions, retired veterans	2,334 25
Pensions, retired laborers	6,030 62
Annuity, Acts of 1920 — chapter 132	600 00
Salary, medical inspector	2,222 45
Salary, chief veterinarian	1,000 00
Injured employees	4,183 42
Telephone	737 90
Printing and stationery	718 44
Advertising	9 00
Miscellaneous	3 00
Salary — chauffeur — division engineer	1,625 35
Auto repairs and maintenance,	3,110 02

	\$28,449 44

General expense other than general administration:

Wages, stablemen	.\$52,003 33
Wages, yardmen	11,996 82
Wages, watchmen	8,681 27
Wages, clerks	5,346 47
Hay, grain and straw	40,520 38
Light	1,527 55
Veterinary service and medicine	384 91
Horseshoeing	2,678 35
Harnesses, etc.	192 00
Fuel	610 17
Stable and yards, rent of	150 00
Stable and yards, supplies	1,737 37
Stable and yards, building repairs	2,386 36
Horses — new	1,050 00
Auto repairs and maintenance,	6,013 87

	135,278 85

Operating expenses:

Salaries, district foremen	.\$20,554 06
Salaries, inspectors	51,238 16
Wages, laborers	600,138 62
Holidays and pay allowed	19,585 37

Carried forward \$855,244 50 \$163,728 29

<i>Brought forward</i>		\$855,244 50	\$163,728 29
Vacations		18,909 96	
Shops, labor for repairs		21,662 31	
Dumps, use of		1,039 05	
Snow license		500 00	
Cart repairs		8,149 29	
Tool and repairs		294 47	
Vehicle supplies		153 05	
Sweeping machine repairs		128 48	
Push carts and barrels		1,105 08	
Push brooms, teamsters' brooms, etc.		2,075 00	
Machine brooms		2,112 00	
Sand barrels		224 94	
Sand		1,053 51	
Water cart hose		239 81	
Shovels, hoes and picks, etc.		1,028 90	
Hired autos		66,669 00	
Hired teaming		1,403 00	
Snow plows, parts, etc.		9,489 09	
Shops, stock for repairs		10,430 98	
Autos, repairs and maintenance,		61,333 29	
		<hr/>	<hr/>
		899,517 42	
		<hr/>	<hr/>
		\$1,063,245 71	

STREET OILING AND WATERING BRANCH.

General administration:

Salary, division engineer (in part)		\$125 00	
Printing and stationery		37 82	
Telephone		42 60	
Miscellaneous		4 50	
Auto repairs and maintenance,		873 22	
		<hr/>	<hr/>
		873 22	\$1,083 14

General expense other than general administra-
tion:

Wages of stablemen		\$295 50	
Hay and grain		167 50	
Shops, stock for repairs		69 55	
Horseshoeing		95 00	
Miscellaneous		128 65	
Land and building repairs		38 63	
Auto repairs and maintenance,		631 50	
		<hr/>	<hr/>
		631 50	1,426 33

Operating expenses:

Road oil		\$22,129 04	
Sand		5,409 23	
<i>Carried forward</i>		\$27,538 27	\$2,509 47

<i>Brought forward</i>	. . . .	\$27,538 27	\$2,509 47
Demurrage	. . . .	33 00	
Calcide	. . . .	783 09	
Tools	. . . .	36 09	
Miscellaneous	. . . .	246 65	
			<u>28,637 10</u>
Inspection:			
General foreman	. . . .	\$2,100 00	
Oil	. . . .	2,428 90	
Water	. . . .	20 83	
Calcide	. . . .	64 80	
Sanding	. . . .	531 28	
Building repairs	. . . .	187 41	
Standpipes	. . . .	26 82	
			<u>5,360 04</u>
Labor:			
Oil	. . . .	\$1,381 00	
Water	. . . .	314 50	
Standpipes	. . . .	218 25	
Sanding	. . . .	7,657 51	
Calcide	. . . .	254 50	
Holiday	. . . .	477 00	
Vacation	. . . .	497 00	
Showers	. . . .	92 44	
Land and building	. . . .	1,575 50	
Miscellaneous	. . . .	400 75	
			<u>12,868 45</u>
			<u><u>\$49,375 06</u></u>
Street cleaning expenditures	. . . .	\$1,063,245 17	
Street watering and oiling expenditures	. . . .	49,375 06	
			<u><u>\$1,112,620 77</u></u>

DISTRIBUTION OF EXPENDITURES.

Removing snow	\$310,109 21
Snow work on crossings and gutters	12,537 15
	<hr/>
Flushing streets	\$70,777 09
Street patrolling	54,585 55
Push cart patrolling	164,239 86
Refuse box collections	26,813 75
Cleaning of paved streets	268,316 20
Cleaning of macadam streets	95,037 78
Cleaning of streets by motor machines	48,900 34
Public alleys	3,069 63
Sanding of slippery streets	8,859 15
	<hr/>
Total	740,599 35
Oiling of public streets and ways	\$1,063,245 71
Watering of public streets and ways	45,255 16
	<hr/>
Total	\$1,112,620 77

Summary.

ITEMS.	STREET CLEANING BRANCH.			STREET WATERING AND OILING BRANCH.		
	1925.	1926.	1927.	1925.	1926.	1927.
bor.....	\$582,879 49	\$749,049 39	\$832,665 00	\$17,860 00	\$19,568 45	\$18,734 53
aming.....	27,366 90	62,807 10	68,072 00	5,176 50	395 00	
pplies and repairs.....	127,502 64	136,542 82	162,508 71	30,384 38	31,495 43	30,640 53
Totals.....	\$737,749 03	\$993,399 31	\$1,063,245 71	\$53,420 88	\$51,458 88	\$49,375 06

Macadam Streets Oiled — Cost of Labor, Teaming, Oil, etc., Including Supervision.

DISTRICTS,	Area Oiled Once, Square Yards,	Equivalent Mileage, 30-Foot Roadway.	DATES OF OILING,		Total Cost.	Cost per Square Yard Covered Once.	Gallons Used.	Gallons per Square Yards.
			First.	Last.				
South Boston.....	235,434	14,740	May	20	\$5,656 52	\$0.0218	37,192	.1433
East Boston.....	63,652	3,616	May	3	1,511 61	.0237	8,130	.1277
Charlestown.....	78,884	4,182	June	1	1,781 51	.0225	13,080	.1659
Brighton.....	142,942	8,121	April	25	3,085 54	.0215	20,451	.1430
West Roxbury.....	238,049	14,662	April	30	6,351 49	.0246	47,867	.1855
Dorchester.....	452,958	25,736	May	4	9,087 19	.0200	62,763	.1385
Roxbury.....	408,111	23,188	April	25	5,048 60	.0246	67,506	.1654
South End.....	82,253	4,673	April	30	8,231 15	.0393	11,843	.1439
Hyde Park.....	202,062	11,480	May	11	4,498 55	.0222	31,607	.1564
Totals.....	1,948,345	111,698			\$45,255 16		300,448	
Average.....						\$0.0232		.1542

Cleaning of Paved Streets and Macadam Gutters, 1927.

DISTRICT.	PAVED STREETS		MACADAM GUTTERS		TOTAL PAVED STREETS AND MACADAM GUTTERS		LOADS OF DIRT REMOVED.							CUBIC YARDS OF DIRT REMOVED.											
	PAVED STREETS		MACADAM GUTTERS		PAVED STREETS AND MACADAM GUTTERS					PAVED STREETS		MACADAM GUTTERS		PAVED STREETS AND MACADAM GUTTERS		PAVED STREETS		MACADAM GUTTERS		PAVED STREETS AND MACADAM GUTTERS					
	Square Yards Cleaned Once.	Equivalent Miles of 30-foot Roadway Cleaned Once	Square Yards Cleaned Once.	Linear Miles Cleaned Once.	Cleaned Once	Inspection, Labor.	All Other Charges	Total Cost.	Cost per Thousand Square Yards Cleaned Once.	Loads.	Cost per Load.	Loads.	Cost per Load.	Loads.	Cost per Load.	Total Cubic Yards.	Per Thousand Square Yards.	Cost per Cubic Yard Removed.	Total Cubic Yards.	Per Thousand Square Yards.	Cost per Cubic Yard Removed.	Total Cubic Yards.	Per Thousand Square Yards.	Cost per Cubic Yard Removed.	
South Boston . . .	12,282,537	697,88	1,053,720	370.00	14,236,557	\$27,904.95	\$13,217.70	\$41,122.65	\$2.888	4,363	\$5,966	1,483	\$10,056	5,546	\$7,034	8,726	.7104	\$2,908	2,966	1.518	\$5,043	11,692	.821	\$3,517	
East Boston . . .	9,554,385	542.86	4,190,828	793.71	13,745,213	33,563.53	7,531.25	41,094.78	2.989	3,564	5,516	3,189	6,386	6,753	6,085	7,125	.7466	2,908	6,378	1,521	3,193	13,506	.982	3,043	
Charlestown . . .	11,202,547	806.96	3,006,828	569.47	17,200,375	19,841.79	11,794.23	31,636.02	1.538	2,416	8,612	810	13,367	3,226	9,806	4,832	.3402	4,306	1,620	.538	6,684	6,452	.374	4,903	
Dorchester . . .	11,554,960	673.57	4,125,750	781.39	15,980,740	23,967.40	9,154.44	33,121.84	2.072	3,286	5,609	3,229	4,545	6,515	5,083	6,572	.5543	2,804	6,458	1,565	2,274	13,030	.815	2,541	
Roxbury . . .	5,216,781	296.4	1,084,725	205.14	6,301,506	12,088.41	2,654.51	14,742.92	2.339	1,527	4.58	1,322	4,822	3,140	4,681	3,654	.7004	2.29	2,644	2,437	2,411	6,298	.999	2.34	
Uptown and Back Bay . . .	34,077,409	1,936.21	4,701,580	891.07	38,782,289	34,679.45	10,732.74	45,412.19	1.17	2,253	7.807	2,986	9,317	5,239	8,668	4,506	1322	3,904	4,658	10,473	.2701	4,334			
Downtown . . .	80,090,534	4,550.61			80,000,524	43,347.24	17,078.32	60,425.56	754	5,060	10,658	5,060	10,658	5,060	10,658	11,338	.1415	5,329	5,329	5,329	11,338	.1415	5,329		
North and West Ends . . .	86,695,384	4,925.87			86,695,384	67,747.36	28,050.66	95,798.02	1.104	10,662	8,985	10,662	8,985	10,662	8,985	21,324	2459	4,492	21,324	21,324	21,324	.2459	4,492		
Totals . . .	253,975,137	11,431.26	19,066,761	3,611.08	273,041,895	\$263,140.13	\$100,213.87	\$363,353.98		34,040		13,019		47,059		65,080			26,038			94,118			
Average . . .									\$1.33		\$7,582		\$7,299		\$7,721			2679	\$3,941		1,365	\$3,649		.3447	\$3.86

APPENDIX E.

REPORT OF THE DIVISION ENGINEER OF
THE SEWER DIVISION.

BOSTON, January 1, 1928.

MR. JAMES H. SULLIVAN,
Commissioner of Public Works.

DEAR SIR,— I submit herewith a statement of the activities and expenditures of the Sewer Division for the year ended December 31, 1927.

On January 1, 1927, the Sewer and Sanitary Division was divided, and the Sewer Service was made the Sewer Division, separate from the Sanitary Division.

During the fiscal year 1927 there were built by contractors, day labor and private parties, 18.73 miles of sewers and surface drains throughout the city, making a total of 1,028.59 miles of common sewers and surface drains, which added to 30.93 miles of intercepting sewers, make a grand total of 1,059.52 miles of common and intercepting sewers under the care of the Sewer Division on January 1, 1928.

Six hundred and eighty-two (682) catch-basins were built or rebuilt during the year, making a total of 17,989 under the care of the Sewer Division on January 1, 1928. Six thousand, five hundred eighty (6,580) catch-basins and sixty-six (66) drop inlets were cleaned by contract, the total amount of material removed being 23,184.18 cubic yards.

Three thousand thirty-six (3,036) permits have been issued, as follows: 580 to district foremen and contractors for new construction work, and 2,456 permits to drain layers for laying new house drains or repairing old ones.

Entrance fees to the amount of \$10,664.28 have been deposited with the City Collector for collection from estates upon which no sewer assessment was ever paid, in accordance with the City Ordinances of 1910, chapter 9, section 10.

One thousand, seven hundred fifty-one (1,751) complaints on floodings and other causes have been investigated and reported on; also the gasoline traps in 504 garages have been inspected.

Plans for the assessment of estates for sewer construction have been furnished the Board of Street Commissioners, representing 48,217.75 linear feet of sewers and appurtenances, costing \$319,230.89.

Reported to the City Collector on 4,044 municipal liens in accordance with chapter 60, section 23, of the General Laws, and in addition there were 7,500 reported orally to persons making requests at the Sewer Division office.

The principal works built, together with the sewerage works recommended for the coming year, are as follows:

CITY PROPER.

The widening of Kneeland street, Faneuil Hall square, and Dock square, required new sewers which were built, encased in concrete.

A new pipe sewer encased in concrete was built to replace the old broken down sewer in Piedmont street.

The laying of a 48-inch water pipe necessitated the building of a supplementary pipe sewer by the Water Division, through the Abraham Lincoln School yard adjacent to Arlington street.

Sewerage works will be required on account of the widening of Causeway street, the widening and extension of Nashua street and the extension of Lowell street, also the changing of the grade of Buckingham street.

The Charles river harbor line has been moved outward in the rear of the North Station, so that when the filling in begins, it will be necessary to reconstruct our sewer outlets in that vicinity with special attention to improving drainage conditions in the Canal street and Beverly street districts.

Investigation of complaints in Congress street, Clark street and Alley 824 at rear of Northfield street, shows that these sewers should be rebuilt.

In Belvidere street the separate systems of drainage should be constructed.

The proposed building of a tunnel across Bedford street near Harrison avenue will require the diverting of the Bedford street sewer down Harrison avenue to Hayward place.

A modern type of regulator should be built to replace the existing one at Beacon street near Brimmer street.

ROXBURY.

Pipe sewers were petitioned for and built in Bow-ditch court, Cheney street and Maple street, and the old brick sewer in a part of Hampden street was replaced by a concrete structure.

The separate systems of drainage were built in Harold street and catch-basins and drains in Brookline avenue, Dudley street and Quincy street in advance of the permanent pavement.

The sewerage works for Alley 931 and outlet across Boylston street, near Audubon road should be built in advance of the proposed permanent pavement.

Sewers have been petitioned for in Logan street, Regent court and the Riverway.

A section of the Hampden street sewer, the Dorchester brook overflow north of Massachusetts avenue, and the rebuilding of the Huntington avenue siphon at the Brookline town line, are all recommended for construction.

SOUTH BOSTON.

Sewerage works were built in advance of permanent pavement in A street and E street, on petition of the abutters in Thomas park, and a sewer was built in Hardy street by private parties.

Sewerage works should be built in advance of the proposed permanent pavement in D street, between West First and Claflin streets. On the west side it is proposed to extend the D and Damrell streets overflow across the Midland Division of the New York, New Haven & Hartford Railroad.

A study is being made under a legislative resolve for the development of the whole South Bay, which will call for sewerage works of great magnitude.

EAST BOSTON.

The 12-foot by 10-foot reinforced concrete overflow for the Porter street district, authorized by the Massachusetts Legislature under chapter 259 of the Acts of 1926, is under construction and will continue so during the coming year.

With the exception of a surface drain built in Chelsea place by the Park Department, the work in this district has consisted of minor improvements made in the present system.

Sewerage works will be required in Barnes avenue, Bayswater street and Thurston street which have been laid out and ordered constructed under chapter 393 of the Acts of 1906, and for the petitioners in Lubec street.

The Marginal street overflow near Lewis street is to be extended to the new State Bulkhead.

CHARLESTOWN.

Catch-basins were built in Medford street in advance of the resurfacing, and a sewer was built for the petitioners in Tremont street.

The surface drain outlets from Alford street are to be relocated on account of being cut off by the solid filling placed on the property of the Boston Elevated Railway.

The laying out of Irving place as a public way, the street changes at Sullivan square and the petition from Short Street court will all require sewerage works during the coming year.

BRIGHTON.

A section of the easterly branch of the Shepard brook in Arthur street, consisting of a 5-foot 3-inch concrete surface drain, was completed during the year.

Contracts were awarded for sewers in Beechcroft street, Lane park and Rose Garden circle, all of which had been petitioned for, and in Colborne road, Ransom road, Euston road, Claymoss road, Gardner street, Faneuil street, Parsons street and Bennett street, which were laid out as public streets under chapter 393 of the Acts of 1906.

Sewerage works were built by private parties in Durland street, Duncklee street, Gillard road and Seminary road.

Sewerage works are recommended in Cambridge street, which is to be resurfaced in Hatherly road, and outlet in Foster street; and in Alberta road, Western avenue, Perthshire road, Chiswick terrace, Chiswick road west, Chestnut terrace, Kenrick street and Langley road, which have been petitioned for.

Sewerage works will also be required in the following streets, viz.: Commonwealth avenue (outlet for Colborne road), Gerald road and outlet in Gillard road, Lane park, Adamson street, Riverview road, Brookdale road and outlets in Raneleigh road, Hobart street and Parsons street, which are to be laid out and constructed under chapter 393 of the Acts of 1906.

The concrete surface drain for Shepard brook should be extended, also the open brook course in private land off Foster street should be replaced with a new surface drain.

A storm water outlet should be built for the relief of the Pratt street district.

WEST ROXBURY.

Sewerage works were built in Ashland street on account of widening, and in Eldridge road, Murray Hill road, St. Joseph street extension, Olmstead street, Midvale road, Stellman road, Roslindale avenue and Nikisch avenue in advance of chapter 393, street construction.

On petition of the abutters, sewerage works were built in Cedar street, Hayes street, Wolfe street, Summit road, Bates street, Jeffers street, Mansfield street, Weeks avenue, Alpheus road, Hyde Park avenue, Lindall street, Emmons road, West Saville street, Knoll street, St. Peter street, Cottage avenue, private land (outlet for South street), Atlantis street, Perham street, West Border road, West Roxbury Parkway, New Park avenue, Lasell street, Sedgwick street, Rossmore road, Forest Hills street, Winchester road, Zamora court, Brook road, Ferndale road, Stimson street, Grove street, Birchwood street, Woodbrier road, private land, Wedgemere road, Centre street, Hodgdon terrace, Pond circle and Guernsey street.

For the general improvement of the system, sewerage works were built in private land and Park Lane street, Poplar street, Stellman road and Seeanar road, and by private parties in Vale street and Stella road.

More than sixty petitions for sewers are on file for this district alone, and sewerage works should be built in the order of their importance.

The proposed permanent pavement in Cornell street, the resurfacing of Forest Hills street and Grove street, and the street construction ordered under chapter 393

in Leniston street, Doncaster street and Willow street and outlets in Weld street and Dunbar street will all require sewerage works.

A section of Stony brook and Roslindale brook should be built each year until the work is completed.

DORCHESTER.

The widening of Oakland street and River street and the building of the Southern Artery, under Special Acts of the Massachusetts Legislature, made a cross-town thoroughfare and necessitated the building of a large amount of sewerage works.

A part of the open water course of Davenport brook was replaced with a 7-foot 9-inch by 6-foot 2-inch double concrete conduit.

Sewerage works were constructed in Newkirk street, Ginita street, Adams street, Gene street, Hazleton street, Donald road, Frontenac street, Hosmer street, Elm avenue, Milton avenue extension, Wilder road, Norfolk terrace, Ormond street, Myrtlebank avenue, Hillsboro road, Chester street, Halborn street, Livingstone street, Dyer avenue, Harvard street, Emerson avenue, Rangeley street and outlet in private land, Owencroft road, Charlemont street, Vera street, Druid street and outlet in Morton street, on petitions of the abutters; in Rockdale street, Winston road, Crowell street and Mildred avenue in advance of chapter 393, street construction, and in Quincy street on account of street resurfacing.

The abutters in this district, as well as in other outlying districts, are sending in numerous petitions for new sewers, most of which are urgent and require building.

Morton street, to be widened under a Special Act of the Legislature, and Greenfield road, laid out under chapter 393, Acts 1906, will require sewerage works.

A tide-gate chamber in Dorchester avenue at Hoyt street is needed, also the installation of a new regulator in the old chamber of the Dorchester intercepting sewer near Mt. Vernon street, and the rebuilding of sewers in Dudley street and Crescent avenue, and in River street on account of the repaving; also a connection between the Forest avenue trunk sewer and the Talbot avenue high level sewer in Irma street.

The open waterway of Oakland brook, which is proposed to be replaced by a masonry structure in Favre

street, Richmond road and private land; the Tuttle street outlet in Sydney street, the Auckland street surface drain and the King street overflow are all worthy projects for the general improvement of the areas they serve.

HYDE PARK.

Sunnyside street, Violante street, Milton street and Reservoir street were all built as the result of petitions for sewerage works from the abutters.

On account of the widening of River street a large amount of sewerage works has been built in the street itself, as well as outlets in adjacent streets.

Sewerage works for Caton street, laid out as a public street, Summit avenue, Metropolitan avenue and other streets, in which the abutters have petitioned for sewers, are all recommended for construction; and the pipe sewer for Oakwood street outlet in Pinewood street and George street extended are recommended to be built.

Sewerage works for Dana avenue and outlet in Water street and land of New York, Hew Haven & Hartford Railroad and Metropolitan District Commission; Readville brook in Norton street, Manilla street and Vaughan street; Business street, Barry street, River street and outlet in private land between Mother brook and Business street; George street and Garfield avenue and outlet in Water street, are all required for the handling of the surface water and to prevent floodings.

PUMPING STATION — CALF PASTURE.

Raising and underpinning the boiler foundations, building new foundations and floor for the carpenter shop, and a new suction chamber for No. 5 pump, were the principal items of construction at this place.

The present No. 3 and No. 4 pumps are about forty-five years old and should be replaced by four centrifugal pumps, probably electrically driven.

Float controlled gates are required on the 9-foot sewers at the entrance to the station.

Moon Island.

Minor improvements have been made and others will be required on the outfall works at Moon Island.

THOMAS F. BOWES,
Division Engineer.

SEWER DIVISION.

The work of the Sewer Division is carried on under chapters 27 and 39, Revised Ordinances of 1925, and the following statutes:

Chapter 426, 1897, as amended by 450, 1899, and 268, 1903.

Chapter 283, 1903, as amended by 464, 1907.

Chapter 550, 1907.

Chapter 424, 1908.

Chapter 514, 1908.

Chapter 74, Special Acts of 1918.

THE DUTIES OF THE SEWER DIVISION.

1. Preparation of plans for sewerage works.
2. Construction and maintenance of all sewerage works.
3. Investigation of complaints in regard to defective drainage.
4. The granting of permits for sewer construction.
5. The preparation of plans for the assessment of the cost of sewer construction.
6. The examination of the plans of other corporations proposing to construct works in the public streets with reference to their probable interference with sewerage works.

Total number of permanent employees on pay roll December 31, 1926	327
Total number of permanent employees on pay roll December 31, 1927	317
Total amount of weekly pay roll for week ending December 31, 1926	\$12,674.35
Total amount of weekly pay roll for week ending December 31, 1927	\$12,798.20
Total amount of monthly pay roll December 31, 1926	\$375.02
Total amount of monthly pay roll December 31, 1927	\$100.00
* Total amount of monthly pension roll December 31, 1926:	
Veterans	\$235.87
Laborers	\$180.38

* Chapter 32, General Laws (veterans), chapter 413, Acts of 1911, and amendments thereto (laborers).

Total amount of monthly pension roll December 31, 1927:

Veterans	\$92.54
Laborers	\$150.00

Average weekly pay roll including monthly roll and exclusive of pension roll for fiscal year charged as follows:

Maintenance	\$8,573.83
Construction	\$4,111.52

Average number of permanent men employed

Number of men on pension roll December 31, 1926:

Veterans	4
Laborers	6

Number of men on pension roll December 31, 1927:

Veterans	2
Laborers	5

Rate of wages paid to common laborers \$5.00

Financial Statement from January 1, 1927, to December 31, 1927.

OBJECT.	Balances on Hand Jan. 1, 1927.	Appropriations, Loans and Revenue.	Transfers to	Transfers from	Total Credits.	Expenditures during the Year 1927.	Balances on Hand Dec. 31, 1927.
Sewer Division.....	.....	\$698,720 43	* \$988 36	.....	\$699,708 79	\$699,708 79	*
Sewerage Works.....	\$339,882 18	1,001,028 34	.....	.....	1,340,910 52	971,876 75	\$369,033 77
Sewerage Works, Charles River Basin.....	516 70	.....	.....	.....	516 70	.....	516 70
East Boston Pumping Station and Outlet.....	713,203 42	.....	.....	.....	713,203 42	2,083 61	711,119 81
Totals.....	\$1,053,602 30	\$1,699,748 77	\$988 36	.....	\$2,754,339 43	\$1,673,669 15	\$1,080,670 28

* From Lighting Service.

MAINTENANCE EXPENDITURES JANUARY 1, 1927,
TO DECEMBER 31, 1927.

SEWER DIVISION.

Improved Sewerage.

Pumping Station, Calf Pasture, inside . . .	\$142,064 55
Pumping Station, Calf Pasture, outside . . .	32,637 86
Pumping Station, Calf Pasture, engines . . .	46,357 20
Pumping Station, Calf Pasture, boilers . . .	25,018 32
Pumping Station, Union Park street . . .	10,217 84
Pumping Station, Summer street . . .	1,909 91
Pumping Station, Hyde Park . . .	1,405 92
	<hr/>
Moon Island	\$259,611 60
Main and intercepting sewers	29,515 77
	<hr/>
	18,195 85
	<hr/>
	\$307,323 22

Miscellaneous Charges.

Maintenance Stony Brook	2,237 94
Cleaning catch-basins	87,746 61
Yards and lockers	432 05
Employed at yards	38,972 75
Automobiles	\$66,700 04
Horses, carts, harnesses, etc.	1,176 46
Teaming	7,816 13
	<hr/>
	\$75,692 63
Less amount earned by service teams and auto trucks	23,092 50
	<hr/>
Cleaning sewers	52,600 13
Office salaries	53,683 21
Office expense	23,772 35
Repairing department buildings	2,148 95
Repairing catch-basins, South Boston	\$1,239 82
Repairing catch-basins, East Boston	2,642 34
Repairing catch-basins, Charlestown	1,332 68
Repairing catch-basins, Brighton	2,084 96
Repairing catch-basins, Brighton	1,007 88
Repairing catch-basins, West Roxbury	3,489 00
Repairing catch-basins, Dorchester	5,626 50
Repairing catch-basins, Hyde Park	766 61
Repairing catch-basins, Roxbury	4,215 31
Repairing catch-basins, city proper	6,460 99
Repairing sewers, South Boston	1,554 18
Repairing sewers, East Boston	1,882 93
Repairing sewers, Charlestown	1,372 00
Repairing sewers, Brighton	1,275 06
Repairing sewers, West Roxbury	5,670 88
Repairing sewers, Dorchester	3,782 19
Repairing sewers, Hyde Park	1,163 71
Repairing sewers, Roxbury	3,345 90
Repairing sewers, city proper	3,189 20
	<hr/>
	52,102 14
<i>Carried forward</i>	\$621,019 35

<i>Brought forward</i>	.	.	.	.	.	.	.	\$621,019	35
Pension roll (veterans)	.	.	.	.	.	.	.	2,264	14
Pension roll (laborers)	.	.	.	.	.	.	.	1,915	88
Annuities	.	.	.	.	.	.	.	351	00
Fuel and oil	.	.	.	.	.	.	.	2,895	42
Hardware, tools, etc.	.	.	.	.	.	.	.	5,738	39
Engines and boilers	.	.	.	.	.	.	.	602	35
Sundries and miscellaneous charges	.	.	.	.	.	.	.	40,346	37
Telephones	.	.	.	.	.	.	.	470	59
House connections	.	.	.	.	.	.	.	17,730	88
Rubber goods	.	.	.	.	.	.	.	980	44
Gatehouses, Fenway	.	.	.	.	.	.	.	3,458	61
Stock	.	.	.	.	.	.	.	11,919	82

\$709,693 24

Credit.

Stock transferred and used on construction	.	.	.	\$9,505	65
Fuel and oil transferred and used on construction	.	.	.	478	80
					<u>9,984 45</u>

\$699,708 79

Charges to Various Parties for Work Done and Material Furnished, etc.

E. J. Carty	.	.	.	.	.	.	.	\$1	88
Elizabeth Mahoney	.	.	.	.	.	.	.	20	00
Joseph Buckley	.	.	.	.	.	.	.	6	75
Henry Webber	.	.	.	.	.	.	.	30	00
Philip Capello	.	.	.	.	.	.	.	13	50
M. H. Levanthal	.	.	.	.	.	.	.	15	00
Estate of John Shay	.	.	.	.	.	.	.	13	55
Ezra Andleman	.	.	.	.	.	.	.	10	30
Mary Keliher	.	.	.	.	.	.	.	15	00
Mary Norton	.	.	.	.	.	.	.	11	00
William E. Riley	.	.	.	.	.	.	.	26	70
Annie Danehy	.	.	.	.	.	.	.	12	50
H. E. Cline	.	.	.	.	.	.	.	125	00
Blue Diamond Material Company	.	.	.	.	.	.	.	6	80
Dwight P. Robinson & Co., Inc.	.	.	.	.	.	.	.	* 224	28
Fred E. Bowes	.	.	.	.	.	.	.	13	50
Green Brothers	.	.	.	.	.	.	.	8	50
Harris Goldman	.	.	.	.	.	.	.	11	00
Metropolitan District Commission	.	.	.	.	.	.	.	10,300	00
A. A. Woods	.	.	.	.	.	.	.	13	50
William Lavery	.	.	.	.	.	.	.	13	50
Schoolhouse Commission	.	.	.	.	.	.	.	* 45	30
Turner Center System	.	.	.	.	.	.	.	15	00
Burnett & Sherman	.	.	.	.	.	.	.	11	00
Joseph Shinkus	.	.	.	.	.	.	.	11	00
Hurley-Driscoll Building Company	.	.	.	.	.	.	.	* 197	81
W. H. Hardy	.	.	.	.	.	.	.	* 39	44
Water Service	.	.	.	.	.	.	.	49	00
William Muisa	.	.	.	.	.	.	.	15	00
Patrick J. Lovett	.	.	.	.	.	.	.	6	50
Water Service	.	.	.	.	.	.	.	53	29
Jennie Glassman	.	.	.	.	.	.	.	15	00
M. A. French	.	.	.	.	.	.	.	28	40

Carried forward

\$11,379 00

* To the credit of Sewerage Works Appropriation.

<i>Brought forward</i>								\$11,379 00
Thomas G. Doig								60 75
L. V. Niles								25 00
Fenway Garage								15 00
David R. Pitnoff								35 00
Edgar O. Hunt								11 00
William Perry								30 00
Hotel Brunswick								47 25
P. & J Besse Company								11 75
M. W. Palmer								* 61 54
The Edison Electric Illuminating Company								15 00
J. Cundo								15 00
Boston Transit Department								* 191 10
Thomas Carroll								15 00
Supply Department								1,813 89
Margaret J. Lannon								15 00
T. D. Baxter								7 12
Brauman & Nudle								15 00
J. Lynch								15 00
S. DiNapoli								15 00
Mr. Stronberg								15 00
Cann's Sea Grill								50 63
T. Dennehy & Sons								19 00
Dominick Santurino								15 00
Dorchester Sewer Construction Company								* 43 84
Barnet Levinbaum								8 50
Rose Jacobstein								12 75
William F. Condon								* 87 66
M. A. Christian								* 10 41
John D. Lyons								* 16 44
State Street Trust Company								13 50
Elizabeth J. Higgins								14 00
Michael J. O'Donnell								3 50
William Perry Company								10 00
William Perry Company								24 00
Artemus R. Wood, Jr.								177 72
Boston Elevated Railway								11 00
W. H. Young & Son								6 88
Joseph Miller								8 37
P. Vitale								8 37
Ormac Company								* 50 43
Vincent Yonkus								8 13
State Hotel Company								15 00
Morse Brothers Company								15 00
Old Colony Apartment								15 00
J. Privitero								15 00
L. P. Frederico Company								* 26 04
Huntley Garage								21 96
Anna Franke								15 00
M. Guarino								5 00
Quincy Market Cold Storage Warehouse Company								24 00
Ormac Company								* 88 73
Thomas F. Fallon								26 24
Lloyd H. Chase								5 00
Park Department								* 71 83
C. & R. Construction Company								* 4 75
Water Service								* 165 48
Tillie Berman								3 63
George Gonia								15 00
<i>Carried forward</i>								\$14,941 19

* To the credit of Sewerage Works Appropriation.

Sewer Division.—Maintenance Expenditures, Detail, 1927.

ACCOUNTS.	Total Expenditures.	Labor.	Teaming.	Stock.	Contracts.	Miscellaneous.
Automobiles (25).....	\$66,700.04	\$22,741.27	.....	.....	.....	\$6,226.78
Cleaning catch-basins.....	87,746.61	43,750.49	\$5,664.00	.....	.....	34,911.28
Cleaning sewers.....	53,683.21	33,365.01	4,651.11	.....	.....	2,706.71
Engines and boilers.....	602.35	.....	.....	.....	.....	114.00
Employed at yards.....	38,972.75	38,472.75	.....	.....	.....	94.15
Fuel and oil.....	2,895.42	.....	.....	.....	.....	242.70
Hardware and tools.....	5,738.39	.....	.....	.....	.....	.....
House connections.....	17,730.88	15,947.12	266.00	\$131.52	1,386.24	.....
Horses, carts and harnesses,.....	1,176.46	.....	.....	.....	.....	.....
Maintenance, Stony Brook.....	2,237.94	2,009.94	228.00	.....	.....	\$1,807.94
Office expense.....	2,148.95	.....	.....	.....	.....	311.01
					Stationery and supplies,.....	2,148.95
					Miscellaneous,.....	.....

Sewer Division.—Maintenance Expenditures, Detail, 1927.—Concluded.

MISCELLANEOUS ACCOUNT, DETAIL.

Labor.

Vacations	\$9,935	58
Sick leave	407	22
Workingmen's compensation	2,339	28
Miscellaneous	5,910	98
Inspection — Complaints: Defec- tive drainage, prevention of gaso- lene entering common sewers	4,737	20
General engineering	11,393	30
		<hr/>
Teaming, removing snow	1,396	00
Expert services	75	00
Transportation	945	42
Repairing streets	1,968	56
Medical attendance	479	15
Miscellaneous	758	68
		<hr/>
		<u>\$40,346 37</u>

Sewer Division.—Maintenance Expenditures Detail, 1927.

ACCOUNTS.	Total Expenditures.	Labor.	Teaming.	Waste.	Fuel and Power.	Oil and Gasoline.	Packing.	Valves.	Transportation.	Stable.	Pipe Fittings and Miscellaneous.	Autos.
Pumping station, Calf Pasture:												
Inside.....	\$142,064 55	\$35,477 32	.....	\$491 77	\$93,293 61	\$188 78	.....	.....	\$238 96	.....	\$12,374 11	
Outside.....	32,637 86	27,843 10	\$80 00	.....	.....	.....	.....	.....	.....	.....	\$662 07	3,657 18
Engines.....	46,357 20	36,929 68	.....	.....	1,189 87	\$632 62	\$858 48	.....	.....	.....	6,746 55	
Boilers.....	25,018 32	23,805 99	.....	.....	121 10	.....	.....	.....	.....	.....	1,091 23	
Moon Island.....	29,515 77	23,810 33	.....	.....	480 00	.....	.....	.....	178 05	.....	3,834 35	1,213 04
Main and intercepting sewers.....	18,195 85	14,545 54	2,896 00	.....	.....	.....	.....	.....	.....	.....	754 31	
Pumping stations:												
Union Park street.....	10,217 84	7,098 67	50 00	.....	2,478 24	.....	.....	.....	.....	.....	390 93	
Summer street.....	1,909 91	1,273 18	.....	.....	636 73	.....	.....	.....	.....	.....	40 48	
Hyde Park.....	1,405 92	1,227 50	.....	.....	137 94	.....	.....	.....	.....	.....	40 48	
Totals.....	\$307,323 22	\$172,011 31	\$3,026 00	\$491 77	\$97,026 52	\$1,499 75	\$632 62	\$858 48	\$417 01	\$662 07	\$29,089 14	\$1,608 55

Recapitulation — Maintenance Detail, 1927.

	Improved Sewerage.	Outside Improved Sewerage.	Totals.
Labor.....	\$172,011 31	\$259,288 61	\$431,299 92
Contracts.....	.....	60,605 98	60,605 98
Teaming hired in city.....	3,026 00	17,225 11	20,251 11
Waste.....	491 77	29 01	520 78
Fuel and power.....	97,026 52	2,226 24	99,252 76
Oil.....	1,499 75	1,753 88	3,253 63
Packing.....	632 62	.....	632 62
Valves.....	858 48	.....	858 48
Transportation, etc.....	417 01	945 42	1,362 43
Horses, etc.....	662 07	1,176 46	1,838 53
Pipe fittings and miscellaneous.....	28,768 07	16,454 94	45,223 01
Telephone.....	321 07	470 59	791 66
Automobile, repairs and supplies.....	1,608 55	43,958 77	45,567 32
Stock supplies and miscellaneous.....	.....	21,327 51	21,327 51
	\$307,323 22	\$425,462 52	\$732,785 74
CREDITS.			
<i>Outside Improved Sewerage.</i>			
Labor.....	\$5,486 00	.....	.....
Stock.....	9,984 45	.....	.....
Miscellaneous.....	17,606 50	.....	33,076 95
Totals.....	\$307,323 22	\$392,385 57	\$699,708 79

SUPPLIES AND FUEL, ENTIRE SERVICE.

Supplies.

1,163 pounds grease, 18 and 20 cents.
 2,571 pounds waste, 11 to 16 cents.
 311 pounds cotton rags, 15 cents.
 3,313.8 gallons engine oil, 19.3 and 21.3 cents.
 838.7 gallons cylinder oil, 27.5 and 29.5 cents.
 5 gallons air cylinder oil, 75 cents.
 74 gallons sperm oil, \$1.50 and \$1.40.
 423.8 gallons turbine oil, 49.5 and 65 cents.
 10 gallons lard oil, \$1.50.
 1,269 gallons kerosene oil, 10.9 to 16 $\frac{1}{4}$ cents.

Fuel.

596,247 gallons fuel oil, \$26,523.45.
 173 tons anchracite, \$2,360.28.
 3,108.63 tons bituminous, \$21,897.38.

Cleaning Catch-basins, 1927.—(By Contract.)

Districts.		Contractor.	Start and Finish of Work.	Price per Cubic Yard.	Cubic Yards Excavated by Contractor.	Contractor's Fees Received by Districts.	Total Basins Cleaned.	Total Drop Inlets Cleaned.	Average Cubic Yards per Basin.	Total Cost of Inspection.	Average Total Cost to City per Basin, including Drop Inlets.
1. City proper.....		Patrick J. Healey.....	May 9, 1927 Dec. 3, 1927	\$1.65	9,032.64	\$14,903.86	2,597	27	3.47	\$1,405.19	\$6.22
1 2. Roxbury.....		Patrick J. Healey.....	May 9, 1927 Nov. 29, 1927	1.65	7,539.60	12,440.35	2,088	22	3.6	795.60	6.27
3. South Boston.....		Thomas H. Gorman.....	May 10, 1927 Dec. 1, 1927	1.49	2,765.97	4,121.31	803	7	3.44	991.12	6.31
4. Charlestown and East Boston.....		Montrose Contracting Company, Nov. 1, 1927	May 3, 1927 Nov. 1, 1927	1.75	1,242.03 2,308.61	6,213.61 641	3.52 3.59	8	3.53 3.59	927.68	7.13
7. Hyde Park.....		David W. Norton.....	Nov. 16, 1927 Dec. 7, 1927	1.68	295.34	496.17	99	2	2.97	277.10	7.66
Totals.....					23,184.19	\$38,175.30	6,580	66	.....	\$4,396.69	
					6,580	Total cost: Contractors.....				\$38,175.30	
					66	Inspections.....				4,396.69	
						Advertising.....				9.50	
										\$42,581.49	

Total cubic yards material removed, 23,184.19.
Average cost per basin, including drop inlets, \$6.41.

Average cubic yards, material removed per basin, \$1.518.
Average cost per cubic yard removed, \$1.84.

Sewerage Works.

Expenditures, January 1, 1927, to December 31, 1927.

ACCOUNTS.	Labor.	Teaming.	Materials.	Miscellaneous.	Paid to Contractors.	Totals.
Engineers' salaries.....	\$106,737 94	.....	.....	.....	.....	\$106,737 94
Engineers' expense.....	5,126 21	\$336 25	.....	.....	\$1,884 68	15,062 02
Pumping station.....	300 00	.....	935 00	44 00	48,401 84	49,680 84
Sundries.....	1,776 67	.....	4,539 23	127 07	.....	6,442 97
Land takings and court executions.....	.....	.....	.....	7,434 00	.....	7,334 00
New manholes, entire city.....	9,220 88	686 50	2,949 49	855 59	8,010 43	21,722 89
New catch-basins, South Boston.....	2,943 01	159 00	1,205 60	463 71	5,501 21	10,272 53
New catch-basins, East Boston.....	1,338 58	42 00	417 79	39 84	1,341 27	3,179 48
New catch-basins, Charlestown.....	96 72	5 00	542 00	.....	673 49	1,317 21
New catch-basins, Brighton.....	1,346 48	46 50	496 60	.....	.....	1,889 58
New catch-basins, West Roxbury.....	4,417 68	152 00	1,838 35	103 20	1,997 89	8,509 12
New catch-basins, Dorchester.....	4,667 89	306 25	2,865 40	367 96	15,533 59	23,741 09
New catch-basins, Hyde Park.....	235 96	.....	288 50	.....	4,414 71	4,939 17
New catch-basins, Roxbury.....	10,367 13	732 25	3,294 39	311 39	9,389 28	24,094 44
New catch-basins, city proper.....	13,704 51	478 50	3,865 10	1,959 23	13,741 31	33,748 65
Sewers built in entire city.....	49,489 13	161 25	26,884 58	8,864 44	567,705 42	653,104 82
Totals.....	\$211,768 79	\$3,105 50	\$50,122 03	\$28,285 31	\$67,859 12	\$971,876 75

Sewerage Works, Construction, January 1, 1927, to December 31, 1927, Inclusive.

LOCATION.	Began.	Finished.	Built by.	Length. (Feet.)	Character.	Amount Expended in 1927.
SOUTH BOSTON.						
Binford street, from A street to Necco street and Necco street, from Binford street to Necco street.						\$1,500 00
East Seventh street, from Columbia road to O street.						142 29
Marine road, from I street to K street.	July 11, 1927	July 21, 1927	C. Russo	230	Catch-basin drains, 16 catch-basins.	188 31
Catch-basins and minor drains in E street, from East First street to a point about 1,140 feet northeasterly.	July 26, 1927	Aug. 30, 1927	T. J. O'Connell	250	Catch-basin drains, 2 manholes, 12 catch-basins.	4,030 58
Manholes, catch-basins and catch-basin drain in A street, from Dorchester avenue to Congress street.	Sept. 16, 1927	Oct. 13, 1927	Charles Struzzieri	439 52	12" pipe, sanitary, 16 manholes, 3 catch-basin drains, 1 catch-basin.	4,108 14
Thomas Park, south side, from Covington street to a point 430 feet easterly			M. DeSisto Company	56	Catch-basin drain, 3 manholes, 1 catch-basin.	2,356 30
East Broadway, from L street to Faragut road.			Private parties	186 72	12" pipe, sanitary.	*
Hardy street.						
EAST BOSTON.						
Ashley street, from Boardman street to Whiting street.	Nov. 14, 1927		A. Grande	226	10" pipe, sanitary, 1 manhole.	406 84

*See Washington street, city proper.

Sewerage Works, Construction, January 1, 1927, to December 31, 1927, Inclusive.—Continued.

LOCATION.	BEGUN.	FINISHED.	BUILT BY.	LENGTH. (FEET.)	CHARACTER.	AMOUNT EXPENDED IN 1927.
EAST BOSTON,—Continued.						
Marginal street, from about 400 feet west of Jeffries street.	M. DeSisto Company.....	34	Catch-basin drain. 2 catch-basins.	*
Chelsea place.....	Park Department.....	177.10	10' pipe, sanitary. 1 manhole.	
CHARLESTOWN.	A. Piatelli.....	38.25	10' pipe, sanitary. 1 manhole.	†
Tremont street, near Madison avenue.....
BRIGHTON.
Antwerp street, from Western avenue to Lincoln street; Ascot street, from Antwerp street to Litchfield street; Benson street, from Antwerp street to Litchfield street; Cygnet street, from Antwerp street to Litchfield street; Duval street, from Antwerp street to Litchfield street.	\$11,917.05
Cambridge street, from Royal street to Mansfield street and outlet in Royal street; Commonwealth avenue, north side, from culvert 600 feet west of Essex street to Essex street.	1,074.08
Graylock road, from Glenville road to Allston street; Gordon street, from Pomeroy street to Saunders street; Allston Heights, from Cambridge street to Colon street.	9,269.36
Morris street, from Market street to Glenoe street; Brayton road, from Brayton way to Newton line.	297.28

Montealn avenue, from Glencoe street to Dustin street; Elta street, from Saybrook street to Montealn avenue; Murdock street, from Cushman road to Montealn avenue.				455 95
North Crescent circuit, from Breck avenue to 875 feet easterly.				455 15
Wade street, from Commonwealth avenue to 650 feet southwesterly.				363 15
Funnel street, from Parsons street to Goodenough street; Bennett street, from Oakland street to Parsons street; Ransom road, from 160 feet southwest of Claymoss road to about 120 feet northwesterly; Gardner street, from Alcorn street to 150 feet northwesterly; Parsons street to 85 feet north of Funnel street.	June 27, 1927	Sept. 15, 1927	M. Guarino	11,655 51
Lane park, northerly branch, from Foster street, westerly.	July 25, 1927	Sept. 14, 1927	A. Piatelli	3,560 21
Gardner street, from Alcorn street to Malmvern street.	Sept. 16, 1927	Oct. 26, 1927	M. Guarino	3,063 56
Rose Garden circle, from Foster street easterly.	Dec. 12, 1927	Jan. 11, 1928	C. Russo	345 90
Colborn road, from Commonwealth avenue to Easton road; Ransom road, from Colborn road to Claymoss road; Easton road, from Claymoss road to Colborn road; Claymoss road, from Commonwealth avenue to Monastery road.	Sept. 26, 1927		J. Tolksen	16,081 81

[†] See Hyde Park avenue, West Roxbury.

See Washington street, city proper.

Sewerage Works, Construction, January 1, 1927, to December 31, 1927, Inclusive.—Continued.

LOCATION.	Begun.	Finished.	Built by.	Length. (Feet.)	Character.	Amount Expended in 1927.
BRIGHTON.—Continued.						
Reservoir road, from existing sewer to Boston & Albany Railroad.	Nov. 4, 1927	Nov. 30, 1927	Ormac Company.....	110.10 94.76	8" pipe, sanitary 10" pipe, surface, 2 manholes.	\$1,141.65
Shepard brook, easterly branch in Arthur street, from Hichborn street to North Beacon street.	Oct. 31, 1927	Dec. 21, 1927	A. Daddario	49.18 399.41 370.76	10" pipe, sanitary 5' 3" concrete surface, 12" pipe, sanitary, 5 manholes.	6,092.21
Durland street, Dunckle road, Seminary road, Gillard road.	.....	.....	Private parties.....	209.50 430.20 497.54 219.30	10" pipe, sanitary. 10" pipe, sanitary. 10" pipe, sanitary. 10" pipe, sanitary, 9 manholes.	.....
WEST ROXBURY.						
Morton street, from Morton road to Canterbury street.	.....	.....	.....	.....	.....	4,709.00
Whiting street, Harwood street, Keith street and Baker street.	.....	.....	.....	.....	.....	427.02
Corey street, from Centre street to Grayfield avenue.	.....	.....	.....	.....	.....	531.23
Baker street, from Elmwood street to Centre street; Nut street, from Glendale road to 200 feet southerly; Riverview street, from North avenue to Upland street.	.....	.....	.....	.....	.....	3,304.36
Hillside avenue, from Clarendon avenue to Summer street.	.....	.....	.....	.....	.....	788.01
Private land, Addington road extended, and West Border road, and West Roxbury Parkway.	.....	.....	.....	.....	.....	3,240.36

Realtor road, from Willowdean avenue to Weld street.	1,584 19
Rockwood street, from existing sewer to 150 feet northerly.	1,406 33
View South avenue, from St. Rose street to 180 feet southerly.	1,101 07
Walworth street, from Brook street to Washington street.	2,334 54
Willowdean avenue, from Parkvale road to Weld street; St. Peter street, from Paul Gore street to 200 feet southwesterly; North Harvard street, from Bertram street to Kingsley street, Brighton.	791 09
Goldsmith brook in Pond street, from Moss Hill road to Rockwood street; Rockwood street, from Pond street to private land; private land, from Rockwood street.	852 25
Pender street, from Dent street to La Grange street; Hopkins road, from Pond street to Mt. Valley road.	346 56
St. Joseph street, from Woodman street to South street; Dickinson road, from Washington street to 450 feet southwesterly, Brighton; Sunset street, from Eldora street to Parker Hill avenue, Roxbury.	935 39
Stratford street, from Woodward road to West Roxbury Parkway; Woodward road, from West Roxbury Parkway to Stratford street; Boxford terrace, from Park street to 200 feet southwesterly.	1,276 25
Pershing road, from Centre street to Pond View avenue.	116 48
Parkway avenue and West Roxbury Parkway; Lasell street, from Harwood street to La Grange street.	760 89
Maple street, from Addington road to Weld street.	201 01

Sewerage Works, Construction, January 1, 1927, to December 31, 1927, Inclusive.—Continued.

Location.	Begun.	Finished.	Built by.	Length, (Feet.)	Character.	Amount Expended in 1927.
WEST ROXBURY.—Continued.						
Alarie street, from Spring street to Centre street; Louder's lane, from existing sewer to end of street.	Nov. 20, 1926	April 20, 1927	Joseph Capone,	330.70	10" pipe, sanitary 3 manholes.	\$6,309.23
Stony brook, section 10A, and Roslindale branch of Stony brook, from Toll Gate way to Braden street.	June 14, 1926	Aug. 4, 1927	J. J. Coughlin Sons Company,	13.85 213.38 16 26	17' by 13' 9" concrete conduit, 11' 3" by 10' 9" concrete conduit, 24" D. S. pipe, surface, 12" C. I. pipe, surface, 2 manholes.	54,153.15
148 Private land, from Roslindale avenue to Metropolitan avenue; Pheasant street, from Falcon street to Bobolink street.	Feb. 9, 1927	April 23, 1927	Joseph Tedesca,	100.18 66.04 380.59 40	18" pipe, surface 15" pipe, surface, 12" pipe, surface, Catch-basin drain, 5 manholes, 2 catch-basins.	5,039.73
La Grange street, from Lasell street to Vermont street; Caspar street, from Metropolitan sewer to Lasell street; Verrick road, from Chiswick road to Temple street; Wooley street, from Metropolitan sewer to Brook Farm road; Beech street, from Alpheus road to Poplar street.	March 21, 1927	June 28, 1927	M. DeSisto Company,	526.42 481.50 419.47 424.40 778.99	10" pipe, sanitary 10" pipe, sanitary 10" pipe, sanitary 20" and 10" pipe, surface, 10" pipe, sanitary, 13 manholes.	12,420.79
Russett road, from Weld street to 275 foot southeast of Pierpont road; Pierpont road, from Centre street to Theodore Parker road.	March 21, 1927	May 2, 1927	DeCristoforo Brothers Company,	630.46 462.49 283.72 280.82 147	15" pipe, surface 12" pipe, surface 10" pipe, surface 10" pipe, surface, Catch-basin drain, 12 manholes, 11 catch-basins.	6,699.42

Vermont street and outlet in private land, from Caspar street to Vermont street.	Dec. 3, 1926	June 15, 1927	V. Bartletta	2,223.80 1,136.02 938.82 20" and 10" pipe, surface. 135.11 10" pipe, surface. 46 Catch-basin drain. 29 manholes. 4 catch-basins.	12" pipe, sanitary 10" pipe, sanitary. 20" and 10" pipe, surface. 135.11 10" pipe, surface. 46 Catch-basin drain. 29 manholes. 4 catch-basins.	22,193.03
Winton street, from 350 feet southeast of Hauteville street extension to about 260 feet southeast.	Nov. 22, 1926	May 11, 1927	Piatelli & Andreasse	261.41 12" pipe, surface. 2 manholes.	3,370.80	
Montview street, from Carey street to Kirk street.	May 17, 1927	June 25, 1927	Charles Struzziery	422.82 385.05 844.83 216 15" pipe, surface. Catch-basin drain. 12 manholes. 8 catch-basins.	10" pipe, sanitary 10" pipe, surface. 135.11 10" pipe, surface. 216 8 catch-basins.	50 19
Roslindale avenue, from Beech street to Dudley avenue.	Oct. 11, 1927	.....	Joseph Todecsa	660 15" pipe, sanitary. 4 manholes.	8,177.69	
Woodbrier road, from Centre street to 510 feet southeasterly; private land, Woodbrier road to Wedgemere road; Wedgemere road, from Centre street to 500 feet southeasterly; Centre street, from Dedham line to Grove street; Centre street, from Glendale road to Woodbrier road.	May 9, 1927	June 16, 1927	DeCristoforo Brothers Company	496.24 224.54 157.51 12" pipe, surface. 337.31 213 9 manholes. 10 catch-basins.	20" pipe, surface 15" pipe, surface. 12" pipe, surface. 10" pipe, surface. Catch-basin drain. 213 9 manholes. 10 catch-basins.	4,204.20
Williams street, from Plainfield street to Forest Hills street.	May 26, 1927	July 1, 1927	A. Cefalo	473.20 95.20 169 12" pipe, surface 10" pipe, surface. 5 manholes. 10 catch-basins.	12" pipe, surface 10" pipe, surface. 5 manholes. 10 catch-basins.	4,008.99
149						7,820.79
Elbridge road, from Hyde Park avenue to Patten street; Murray Hill road, from Florence street to Washington street.						288.99
Midvale road, from Maple street to Corey street; Stellman road, from Stonybrook to Washington street.						

Sewerage Works, Construction, January 1, 1927, to December 31, 1927, inclusive.—Continued.

Location.	Begun.	Finished.	Built by.	Length. (Feet.)	Character.	Amount Expended in 1927.
WEST ROXBURY.—Continued.						
Rossmore road, from Plainfield street to Forest Hills street; Forest Hills street, from Rossmore road to Lotus street.	April 28, 1927	June 27, 1927	A. Cefalo	1,095.54	10" pipe, sanitary 8 manholes.	\$5,638 01
Private land, outlet from South street; Metropolitan sewer to South street.	May 18, 1927	June 8, 1927	Zoppo & Civitares	168.61	10" pipe, sanitary 2 manholes.	1,057 26
Atlantis street, from Lasell street to Glenham street; Perham street, from Vermont street to Keith street; Knoll street, from existing sewer to Centre street.	May 24, 1927	June 25, 1927	Joseph Todesca	883.37	10" pipe, sanitary 12" pipe, surface 6 manholes.	3,881 81
West Border road, from Pelham street to Martin street; West Roxbury Parkway, from Centre street to New York, New Haven & Hartford Railroad; New Park avenue, from West Roxbury Parkway to Beech street; Lasell street, from 150 feet east of Caspar street to Newfield street; Sedgewick street, from existing sewer to South street.	June 8, 1927	July 26, 1927	V. Barletta	767.36	10" pipe, sanitary 24" to 10" pipe, surface 20" pipe, surface 10" pipe, sanitary	10,996 37
Poplar street, from Dale street to Beech street; Bates street, from Beech street to Alpheus road; Jeffers street, from Bates street to Alpheus road; Mansfield street, from Jeffers street to Alpheus road; Weeks avenue, from Mansfield street to Alpheus road; Alpheus road, from Beech street to Bates street.	June 25, 1927	Aug. 15, 1927	DeCristoforo Brothers Company.	2,440.12	10" pipe, sanitary 20" pipe, surface Catch-basin drain 6 manholes 1 catch-basin.	9,426 65

Cedar street, from Washington street to 600 feet southeast; Hayes street, from Beech street to 332 feet south; Wolfe street, from Dent street to 400 feet northeast; Sunnit road, from La Grange street to 230 feet southwest; Stellman road, from Seeanar road to 192 feet northwest; Seeanar road, from Florence street to Stellman road.	July 3, 1927	Sept. 16, 1927	A. Cefalo	10" pipe, sanitary 10" pipe, sanitary 10" pipe, sanitary 10" pipe, sanitary 12" pipe, surface. 12" and 10" pipe, surface. 256, 68 27 manholes.	598, 61 332, 20 400, 38 399, 18 649, 79 606, 41 330, 80 356, 68 27 manholes.	10" pipe, sanitary 10" pipe, sanitary 10" pipe, sanitary 10" pipe, sanitary 12" pipe, surface. 12" pipe, surface. Catch-basin drains. 10 manholes. 5 catch-basins.	13,172 41
Olinstead street, from Forest Hills street to Peter Parley road; Park lane and private land, from Olinstead street to 450 feet easterly.	July 22, 1927	Oct. 27, 1927	Joseph Todesca	12" pipe, surface 10" pipe, surface. Catch-basin drains. 54 10 manholes.	389, 53 108, 98 54	12" pipe, surface 10" pipe, surface. Catch-basin drains. 10 manholes.	7,505 05
St. Joseph street extension, from Woodman street to Arborway.	Aug. 8, 1927	Sept. 2, 1927	C. Russo	10" pipe, sanitary 10" pipe, sanitary 8 manholes. 4 catch-basins.	394, 77 48	10" pipe, sanitary 10" pipe, sanitary 8 manholes. 4 catch-basins.	3,703 29
Cottage avenue, from Centre street to a point 1,050 feet southeasterly.	Aug. 22, 1927	Nov. 20, 1927	M. DeSisto Company	10" pipe, sanitary 12" pipe, sanitary. 6 manholes.	562, 60 467, 65	10" pipe, sanitary 12" pipe, sanitary. 6 manholes.	6,725 50
Knoll street, from existing sewer to Centre street; St. Peter street, from Boylston street to 360 feet northeasterly.	Sept. 6, 1927	Oct. 27, 1927	A. Grande	10" pipe, sanitary 12" pipe, surface. 269, 85 4 manholes.	139, 66 124, 85 269, 85	10" pipe, sanitary 10" pipe, sanitary. 269, 85 4 manholes.	1,436 05
Emmons road, from Board of Survey street, No. 644 to West Saville street; West Saville street, from Emmons road to La Grange street.	Sept. 12, 1927	Oct. 1, 1927	C. Russo	10" pipe, sanitary 3 manholes.	570, 20	10" pipe, sanitary 3 manholes.	2,524 48
Nikisch avenue, from Beech street to West Roxbury Parkway.	Oct. 5, 1927	Nov. 30, 1927	A. Grande	20" pipe, surface 18" pipe, surface. 220, 53 12" pipe, surface. 114, 27 2" 3" concrete conduit. 99 7 manholes. 7 catch-basins.	292, 20 200, 30 220, 53 114, 27 99	20" pipe, surface 18" pipe, surface. 12" pipe, surface. 12" pipe, surface. Catch-basin drains, 7 manholes. 7 catch-basins.	5,814 02

Sewerage Works, Construction, January 1, 1927, to December 31, 1927, Inclusive.—Continued.

Location.	Began.	Finished.	Built by.	Length. (Feet.)	Character.	Amount Expended in 1927.
WEST ROXBURY.—Continued.						
Stimson street, from Washington street to Grove street; Grove street, from Stimson street to Birchwood street; Birchwood street, from Washington street to Grove street.	Oct. 5, 1927	.....	Charles Struzzery.....	735 20' 15' 12' 15' 10' pipe, sanitary..... 212 390 125 32 10 manholes, 2 catch-basins.	.....	\$7,886.55
Potomac street and outlet in Vermont street.	Oct. 11, 1927	Dec. 1, 1927	M. Guarino.....	109.90 8' 10' 10' 10' 10' 8 manholes.	109.90 8' 10' 10' 10' 10' 8 manholes.	527.74 2,999.15
Hodgdon terrace, from Midvale road to 110 feet, southeasterly; Pond circle northerly, from Pond street, Gurney street, from existing conduit to 125 feet easterly.	Sept. 16, 1927	Oct. 15, 1927	A. Piatelli.....	160.57 10' 10' 10' 10' 10' 38.25 4 manholes.	160.57 10' 10' 10' 10' 10' 38.25 4 manholes.	1,990.52
Hyde Park avenue, from Wyman street to Stony Brook; Lindall street, from Ashland street to 100 feet northeasterly; Remont street, near Madison avenue, Charlestown.	Nov. 1, 1927	Nov. 22, 1927	John Williams.....	801.35 10' 5 manholes.	801.35 10' 5 manholes.	2,511.46
Ferndale road, from Roslindale Branch Stony Brook to Washington street.	Nov. 14, 1927	Dec. 20, 1927	John Williams.....	599.70 10' 3 manholes.	599.70 10' 3 manholes.	2,757.09
Brook road, from Plainfield street to Forest Hills street.	Nov. 15, 1927	Dec. 1, 1927	M. Guarino.....	230.55 10' 202.85 6 manholes.	230.55 10' 202.85 6 manholes.	1,123.01
Winchester road, from Centre street to about 600 feet westerly.	Not started.....	.....	A. Grande.....	.....	.....	8.00

Ashland street, from Wood avenue to Washington street.	Aug. 15, 1927	Aug. 15, 1927	1,713.20	10" pipe, sanitary			
				1.305.35 10" pipe, surface.			
Linden and Walworth streets	May 21, 1927	May 21, 1927	1,531.80	12" pipe, surface.			
				1.579.80 15" pipe, surface.			
Vale street . . . . .	. . . . .	. . . . .	18" pipe, surface.	18" pipe, surface.	
				Catch-basin drain.			
Stella road . . . . .	. . . . .	. . . . .	500	48 manholes, 32 catch-basins.	
				723 86			
DORCHESTER.							
Regina road, from Washington street to Alpha road; Danube street, from 320 feet northeast of Dewey street to 215 feet southwest; Mt. Bowdoin terrace, from 290 feet southeast of Eldon street, to 201 feet southeast.	153	. . . . .	33.50	24" pipe, surface		
				48.25 8" pipe, sanitary.			
Walk Hill street, from Fottler road to Wellington Hill footway; Courtland road, from Morton street to Harvard street.	153	. . . . .	103.14	10" pipe, sanitary		
				2 manholes.			
Westmoe road, from Decring road to 525 feet northwesterly.	153	. . . . .	402 07	402 07		
				140 90			
Bismarck street, from Oakland street to Messinger street.	153	. . . . .	300 08	300 08		
				284 37			
OAKLAND.							
* Oakland street, Dorchester.							
† Included in cost of new catch-basins.							

Sewerage Works, Construction, January 1, 1927, to December 31, 1927, Inclusive.—Continued.

LOCATION.	BEGUN.	FINISHED.	BUILT BY.	LENGTH. (FEET.)	CHARACTER.	AMOUNT EXPENDED IN 1927.
<i>DONCASTER.—Continued.</i>						
Hollingsworth street, from Randolph road to Oakland street; Oakland street, from Chester street to Hollingsworth street; Verdun street, from Codman street to Carruth street; Drunkeld street, from Fayston street to Quincy street; Menton street, from Standard street to Groveland street; Meridian street, from Monland street to Nay street; East Boston; Cutting street, from Nashua street to Lowell street, city proper.	.....	.....	.....	.....	.....	\$2,426 37
Hillside street, from Adams street to 820 feet northwesterly.	.....	.....	.....	.....	.....	749 17
Ormond street, from Outlook road to 657 feet north, and northwesterly and outlet in passageway to Goodale road.	.....	.....	.....	.....	.....	570 25
Rockdale street, from Randolph road to 656 feet northeast; Duxbury road, from Riverdale road to River street; Hosmer street, from 163 feet northwest of Norfolk street to 225 feet northwest.	.....	.....	.....	.....	.....	2,555 47
Outlook road, from Ormond street to 525 feet northwesterly.	.....	.....	.....	.....	.....	91 85
Dorchester avenue, from King street to Cheverus road.	March 17, 1927	April 22, 1927	James J. Conway.....	104.12 49.50	15" pipe, sanitary..... 12" pipe, ss sanitary..... 1 manhole.	3,193 97
Delmont street, from Adams street to Charlemont street; private land, from Delmont street to Franconia street.	March 22, 1927	April 27, 1927	A. Cefalo.....	607.00 643.33	10" pipe, sanitary..... 12" pipe, surface..... 11 manholes.	4,820 90

Colorado street, Orlando street and Messinger street,	May 15, 1927	May 24, 1927	C. Russo,	458.78	10" pipe, sanitary	500.00
Milton avenue extension, from Codman Hill avenue to 120 feet northerly; Wilber road, from Normandy street to Blue Hill avenue,	March 29, 1927	April 14, 1927	James J. Conway,	134.10	10" pipe, sanitary	3,874.91
Goodale road, from about 235 feet southeast of Wellington Hill street to 135 feet northwest,	Nov. 26, 1926	March 31, 1927	N. DeBartolomeo Company,	205.60	10" pipe, sanitary 2 manholes.	898.32
Bushnell street, from Weyanoke street to Van Winkle street; Lenoxdale avenue, from 205 feet southeast of Milton street to 45 feet southeast; Rosemont road, northeast and southeast, from Adams street to Florida street,	Nov. 3, 1926	May 7, 1927	Charles Struzik,	1,546.05	12" pipe, sanitary	1,689.61
Codman street, from Oakridge street to Nevada street; Codman Hill avenue, from Washington street to Milton avenue, extension; Milton avenue extension, from Codman street to Codman Hill avenue,	Oct. 4, 1926	May 14, 1927	George J. Regan,	422.90	10" pipe, sanitary 4 manholes.	1,207.16
Eleo street, from Alabama street to Wabash street; Wabash street, from Eleo street to Prairie street; private land, from Prairie street to Harvard street; Harvard street, from private land to Hazleton street; Hazleton street, from Harvard street to Westmore road,	Nov. 12, 1926	Jan. 10, 1927	M. Guarino,	7.50	12" pipe, surface	2,144.97

Sewerage Works, Construction, January 1, 1927, to December 31, 1927, Inclusive.—Continued.

LOCATION.	BEGUN.	FINISHED.	BUILT BY.	LENGTH. (FEET.)	CHARACTER.	AMOUNT EXPENDED IN 1927.
<i>DORCHESTER.—Continued.</i>						
Goodale road, from 440 feet southeast of Wellington Hill street, to 209 feet northwest; Hazelton street, from 170 feet southwest of Wellington Hill footway to 50 feet northwest; Halborn street, from Delhi street to 190 feet southeast; Ruskin road, from Radcliff road to 125 feet northwest.	Dec. 2, 1926	March 29, 1927	James J. Conway.....	324.96 203.60	10" pipe, sanitary..... 10" pipe, surface, 5 manholes.	\$4,725.70
Southern Artery, from Evans street to Neponset Bridge.	April 15, 1927	June 9, 1927	Day labor.....	139.48 32.20 21	10" pipe, sanitary..... 12" pipe, sanitary, 8 manholes.	6,592.36
Southern Artery, from Neponset avenue to about 150 feet southwesterly.	June 9, 1927	Aug. 16, 1927	James J. Conway.....	252.16 185.40 74.12 7.50	10" pipe, sanitary..... 15" pipe, surface, 12" pipe, surface, 12 C. 1 pipe, surface, 8 manholes.	5,144.30
Elm avenue, from Burgoynes street to Adams street.	May 18, 1927	Sept. 15, 1927	James J. Conway.....	196.10 10" pipe, 27.5.06 374.76 209.82 233.84	12" pipe, sanitary..... 10" pipe, sanitary, 10" pipe, sanitary, 10" pipe, sanitary, 10" pipe, sanitary, 11 manholes.	95.44 7,810.92
Norfolk terrace, from Norfolk street to New York, New Haven & Hartford Railroad; Ormond street, from Wellington Hill street to existing sewer 242 feet southeast of Byes road; Myrtlebank avenue, from 117 feet, northwest of Milton street to 275 feet northwesterly; Hazelton street and outlet in Hillsboro road, from Westmore road, to Gilmer street; Chester street, from existing sewer in Rockway street, to 215 feet northeasterly; Halborn street for existing sewer 172 feet southeast of Delhi street to 182 feet southeasterly.						

Crowell street, from Norfolk street to Evans street.	July 11, 1927	July 23, 1927	George J. Regan.	587.96	12" pipe, surface.	1,876 64
Elm avenue, from Burgoyne street to Wilcox road.	July 21, 1927	Aug. 3, 1927	George J. Regan.	48	Catch-basin drains, 3 manholes, 2 catch-basins.	1,739 09
Frontenac street, from Lucerne street to Blue Hill avenue.	Aug. 3, 1927	Aug. 9, 1927	George J. Regan.	563.15	10" pipe, sanitary 4 manholes.	1,338 57
Hosmer street, from existing sewer 388 feet from Norfolk street to about 400 feet northwest, from Mildred street to Play-ground and Quincy street, from Warren street, Roxbury to Columbia road, Dorchester.	Aug. 9, 1927	Sept. 27, 1927	George J. Regan.	221.10	10" pipe, sanitary 3 manholes.	3,384 67
Mildred avenue, from Babson street to Play-ground and Quincy street, from Warren street, Roxbury to Columbia road, Dorchester.	July 18, 1927	Aug. 10, 1927	Zoppo & Civitares.	411.40	10" pipe, sanitary 2 manholes.	6,975 90
Donald road, from Blue Hill avenue to Harvard street.	July 28, 1927	Aug. 8, 1927	Charles Struzzieri.	165.66	15" pipe, surface.	6,975 90
Oakland street, from Favre street to Wood avenue; Colorado street, from Croydon street to Oakland street; Croydon street, from Itasca street to Alabama street; Itasca street, from Croydon street 62 feet south to private land; private land, from Hallowell street to Savannah avenue; private land north of Oakland street, from Savannah avenue to Itasca street; Savannah avenue, from 100 feet northeast of Oakland street to 257 feet northeast; Alabama street, from Croydon street to Canaan street; Canaan street, from Alabama street to Livermore street; Ashland street, from Wood avenue to Washington street, West Roxbury.*	Aug. 15, 1927	.....	A. Baruffaldi.	322.08	10" pipe, sanitary 318.15	1,449 95
Hazelton street, from Hillsboro road to about 415 feet southeast.	Aug. 17, 1927	Aug. 31, 1927	A. Grande.	437.60	10" pipe, sanitary 1 manhole.	1,102 98

* See West Roxbury.

Sewerage Works, Construction, January 1, 1927, to December 31, 1927, Inclusive.—Continued.

LOCATION.	Begun.	Finished.	Built by.	Length. (Feet.)	Character.	Amount Expended in 1927.
DORCHESTER.—Continued.						
Gene street, from Humphreys street to Holden street.	Sept. 8, 1927	Sept. 20, 1927	M. Guarino.....	258.25	12" pipe sanitary 3 manholes.....	\$1,342 72
Adams street, from existing sewer 18 feet north of Fairview street to 120 feet northwesterly.	Sept. 15, 1927	Sept. 24, 1927	A. Grande.....	121.50	12" pipe, sanitary 1 manhole.....	1,044 28
Rockdale street, from Oakland street to Randolph road.	Sept. 29, 1927	Nov. 14, 1927	C. Russo.....	435.05	15" pipe, surface. 12" pipe, surface. Catch-basin drains. 9 manholes. 10 catch-basins.	7,452 83
Vera street, from Southern Artery to 280 feet northerly; Southern Artery, from Oakridge street to 80 feet west of Vera street; Druid street, from Morton street to Southern Artery and north in Morton street, from Oakridge street to Druid street.	Oct. 11, 1927	.....	George J. Regan.....	713.92	10" pipe, sanitary.....	3,642 85
Winston road, from Laerne street to Willowwood street.	Sept. 27, 1927	Oct. 14, 1927	George J. Regan	240	10" pipe, surface.....	3,303 61
Ginna street, from existing brick sewer, 20 feet southeast of Centre street to 130 feet southeasterly.	Sept. 27, 1927	Oct. 11, 1927	James J. Conway.....	128.40	10" pipe, sanitary 1 manhole.....	787 82
Charlemont street, from Chelmsford street to 425 feet northerly.	Oct. 3, 1927	Oct. 15, 1927	A. Daddario.....	442.02	12" pipe, sanitary 2 manholes.....	1,275 31
Owencroft road, from Southern Artery to Hurlefort avenue extension.	Oct. 17, 1927	Nov. 12, 1927	John Williams.....	667	18" pipe, surface 6 manholes.....	2,603 03

Rangley street and outlet in private land, from Southern Artery to Milton street.	Oct. 10, 1927	Nov. 10, 1927	A. Piatelli.....	629.32 601.35	10" pipe, sanitary, 12" pipe, surface, 7 manholes.	3,028 86
Southern Artery, south side, from Emerson avenue, 90 feet, west and 170 feet east; Emerson avenue, from Morton street to Southern Artery.	Dec. 1, 1927	.....	M. Guarino.....	62	12" pipe, sanitary.	353 72
Newkirk street, from Manley street to 100 feet southwest.	Oct. 24, 1927	Nov. 2, 1927	John J. Loonie.....	100.15	10" pipe, sanitary, 1 manhole.	844 41
Harvard street, from Hazleton street to 195 feet northeast.	Oct. 11, 1927	Nov. 23, 1927	Leo J. Nawn, Inc.....	192.20	10" pipe, sanitary, 1 manhole.	1,212 73
Tuttle street and Savin Hill avenue, from existing manhole 45 feet north of Savin Hill avenue to existing manhole at Mildred street.	Nov. 2, 1927	Nov. 18, 1927	T. J. O'Connell.....	131.50	12" pipe, sanitary, 1 manhole.	766 88
Livingstone street, from Ashton street to Lacerne street.	Dec. 22, 1927	Jan. 2, 1928	M. Desisto Company.....	108.40	10" pipe, sanitary, 2 manholes.	116 77
Dyer avenue, from Blue Hill avenue to 335 feet northwest; Harvard street, from 195 feet northeast of Hazleton street to 190 feet northeast.	Dec. 19, 1927	.....	C. Russo.....	190	10" pipe, sanitary, 1 manhole.	150 42
Davenport Brook, from existing culvert at Southern Artery to about 800 feet west of existing concrete culvert.	.....	.....	T. J. O'Connell.....	.....	.....	7 50
Violante street, from River street to 260 feet northeast; Milton street, from Adams street to Millwood street.	.....	.....	.....	.....	282.02 172.75	10" pipe, sanitary, 4 manholes.
Fernald terrace, from Quincy street north easterly to end.	.....	.....	.....	76	Catch-basin drain, 4 catch-basins.	†
Alicia road, Bowdoin Green, Cheverus road, Francis park, Grayson street, Owencroft road, Stone terrace, Whitten street.	.....	.....	Private parties.....	891.72 106.65 93.00 129.85 520.93 608.97 96.35 308.30	12" pipe, sanitary, 10" pipe, sanitary, 12" pipe, sanitary, 10" pipe, sanitary, 10" pipe, sanitary, 12" pipe, sanitary, 10" pipe, sanitary, 10" pipe, sanitary.	†

* See Sunnyside street, Hyde Park.

† See Washington street, city proper.

Sewerage Works, Construction, January 1, 1927, to December 31, 1927, Inclusive.—Continued.

Location.	Begin.	Finished.	Built by.	Length. (Feet.)	Character.	Amount Expended in 1927.
HYDE PARK.						
Ashland street, from Wood avenue to 56 feet northeast of Pleasantview street; Moody street, from Ashland street to Roanoke road.						\$2,110 04
Foster street, from Water street to Loring street.						312 76
Vose avenue, from Erie street to Pleasant street; Erie street, from Milton street to Vose avenue; Huntington avenue, from Madison street to Collins street.						964 40
Ruskin road, from Radcliffe road 125 feet northwest.						
Summer Street Brook, private land, Neponset river to River street near Wood avenue.						
Sunnyside street, from Roxanna street to Church street and outlet in Roxanna street, Hyde Park; Violante street, from River street to 200 feet northeast, Dorchester; Milton street, from Adams street to Millwood street, Dorchester.	April 22, 1927	July 6, 1927	A. Grande	1,149 14	10" pipe, sanitary. 8 manholes.	1,446 26
Sunnyside street, from Glenwood avenue to Franklin street.	Aug. 12, 1927	Aug. 29, 1927	Zoppo & Civitarese	344	10" pipe, sanitary. 3 manholes.	7,724 90
River street, from Oakland street to Central avenue; Arlington street, from Pierce street to River street; Pierce street, from West street to Arlington street; Blake street, from River street to 390 feet northwest, private land.	Aug. 15, 1927	...	DeCristoforo Brothers Company.	589 37	3" circular concrete conduit.	1,328 13
				250	3" 3" circular concrete conduit.	
				350	4" circular concrete conduit.	
				50	5" 9" circular concrete conduit.	
				621 52	10" pipe, sanitary.	
				585	10" and 12" pipe, sanitary.	
				1,019 52	10" pipe, surface.	
				1,583 93	12" pipe, surface.	
				730 35	15" pipe, surface.	
				1,262 81	18" pipe, surface.	
				340 98	20" pipe, surface.	
				1,112 85	24" pipe, surface.	
				500	Catch-basin drains. 70 manholes.	
					48 catch-basins.	

Durant road, from Sunnyside street 200 feet northwest.	Aug. 15, 1927	Aug. 29, 1927	Ornae Company	200.70	10" pipe, sanitary 1 manhole.	935 44
Shirley road, from Sunnyside street 200 feet northwest.	Aug. 12, 1927	Sept. 9, 1927	John J. Loonie	193	10" pipe, sanitary 1 manhole.	915 14
River street, from Perkins avenue to Cleveland street and outlet in Barry street, 355 feet easterly.	Dec. 12, 1927	...	John Williams .....	...	...	7 50
Reservoir street, from Milton avenue to Prospect street, 202 feet northeast of Hawthorne street.	June 1, 1927	June 6, 1927	L. Balloni	370	10" pipe, sanitary 2 manholes.	136 11
Roxbury.		T. J. O'Connell April 25, 1927		74	10" pipe, sanitary	†
Beacon street at Brookline avenue; Beacon street, at Charlesgate East and West; A street at Richards street, from South Boston; Arlington street, from Columbus avenue to St. James avenue; Providence street, from Church street to St. James avenue.	Oct. 5, 1926	...	...	64.70	12" pipe, surface	13,515 78
Denison street, from Walnut avenue to 627 feet northwesterly.	...	...	...	137	10" pipe, surface	
Sunnyside street, from Creighton street to Westerly street.	...	...	...	112	Catch-basin drains. 1 manhole. 3 catch-basins.	
Dana street, from Dudley street to Cliff street.	...	...	...	...	...
Leon street, from Greenleaf street to 375 feet southerly.	...	...	...	...	...
Spring court, from Fellows street to 180 feet southeasterly.	...	...	...	...	...
Maple street, from Cheney street to 140 feet southerly.	April 22, 1927	June 9, 1927	A. Cellucci	166.80	12" pipe, sanitary 2 manholes.	1,600 65
Creighton street, near Day street; Dudley street, from Harrison avenue to Blue Hill avenue; Warren street, from Quincy street to Blue Hill avenue.	...	...	Not built .....	...	...	7 25
Island street at Gerard street	Sept. 20, 1927	Sept. 30, 1927	F. E. Bowes	55.50	24" pipe, sanitary	†

* See Dorchester.

† Cost included in new catch-basins.

Parkman street, from North Andover street to Blossom street.				476 24
Public Alley, No. 554, from Appleton street to Chandler street, Appleton street, from Tremont street to Public Alley No. 554.				1,960 51
Faneuil Hall square, Dock square and Union street.	April 18, 1927	June 9, 1927	C. & R. Construction Company.	12,361 26
Kineeland street, from Atlantic avenue to Washington street.	Aug. 30, 1927	Oct. 13, 1927	Zoppo & Civitarese.	10 24" pipe, sanitary. 30" pipe, sanitary.
Piedmont street, from Church street to Arlington street.	Aug. 23, 1927	Oct. 5, 1927	N. DiBartolomeo Company.	101.95 12" pipe, sanitary. 145.45 15" pipe, sanitary. 155.20 18" pipe, sanitary. 224 Catch-basin drains. 12 manholes. 9 catch-basins.
Washington street, from Dover street to Massachusetts avenue; Marginal street, about 400 feet west of Jeffries street, East Boston; East Broadway, from L street to Farragut road, South Boston; Kendall terrace, from Quincy street northeasterly to end, Dorchester.	Sept. 27, 1927	Nov. 23, 1927	M. DeSisto Company.	150.60 15" pipe, sanitary. 160.71 12" pipe, sanitary. 2 manholes. 4 manholes. 5 catch-basins.
Arlington street, from Columbus avenue to Fayette street.			Water service.	183.72 12" pipe, sanitary. 3 manholes.

* Cost included in new catch-basins.

Recapitulation.

DISTRICTS.	Linear Feet Sewers.	Linear Feet Catch-basins Drain.	Manholes.	Catch-basins.	Amount Expended in 1927.
South Boston.....	439.52	552	8	30	\$12,325 62
East Boston.....	403.10	34	2	2	406 84
Charlestown.....	38.25	.....	1	—	—
Brighton.....	8,611.03	543	63	41	66,565 24
West Roxbury.....	40,818.35	1,570	292	96	251,226 45
Dorchester.....	23,093.76	1,169	186	69	192,243 73
Hyde Park.....	10,828.67	500	85	48	58,583 71
Roxbury.....	1,649.80	425	26	25	37,260 87
City proper.....	1,489.18	677	31	30	34,492 36

Length of Sewers Built by Private Parties.

DISTRICT.	Linear Feet Sewers.	Manholes.
South Boston.....	186 72	—
Brighton.....	1,356.54	9
West Roxbury.....	151.39	2
Dorchester.....	2,795.37	—

New Catch-basins and Manholes Built by Day Labor and Contract
January 1, 1927, to December 31, 1927, Inclusive.

DISTRICT.	Catch-basins.	Manholes.	Total Cost.
South Boston.....	25	3	\$11,358 53
East Boston.....	7	10	6,799 48
Charlestown.....	11	2	2,037 21
Brighton.....	5	6	4,061 58
West Roxbury.....	19	8	11,405 12
Dorchester.....	53	5	25,551 09
Hyde Park.....	9	—	4,939 17
Roxbury.....	41	10	27,714 44
City proper.....	66	16	39,547 54
Totals.....	236	60	\$133,414 16

SEWERAGE WORKS LOAN, 1927.

Engineers' salaries, general	\$106,737 94
Amount charged to construction of sewers	25,309 00
	<u><u>\$132,046 94</u></u>

ENGINEERING EXPENSE.

Labor	\$5,126 21
Teaming	336 25
Borings	1,884 68
Transportation	2,874 20
Supplies, etc.	4,840 68
	<u><u>\$15,062 02</u></u>

PUMPING STATION CONSTRUCTION.

Advertising	\$44 00
Labor	300 00
Contracts	48,401 84
Materials, etc.	935 00
	<u><u>\$49,680 84</u></u>

SUNDRIES.

Labor	\$1,776 67
Materials	46,312 63
Miscellaneous	127 07
	<u><u>\$48,216 37</u></u>
Less material charged to jobs	41,773 40
	<u><u>\$6,442 97</u></u>

COURT EXECUTIONS AND AWARDS ON ACCOUNT OF LAND-TAKINGS, ETC.

George E. Wentworth, assignee, Water street and Neponset river, Hyde Park	\$237 87
Boston Catholic Cemetery Association, private land between Harvard and Perry streets, Dorchester	500 00
L. H. Morrell, Colorado street, Dorchester	75 00
Anna L. Cassaboom, Robin street, West Roxbury, Margaret Welsh, Faneuil street, Brighton	100 00
Mary Agnes Meade, private land between Harvard street and Prairie streets, Dorchester	87 53
<i>Carried forward</i>	25 00
	<u><u>\$1,025 40</u></u>

<i>Brought forward</i>		\$ 1,025 40
Hattie B. Coyne, Mt. Bowdoin terrace, Dorchester		17 20
— McNally, Faneuil street, Brighton		45 00
Joseph M. Conry, Rockwood street, West Roxbury		701 40
Katherine McNutty, Faneuil street, Brighton		200 00
V. Barletta, Oswego street overflow (contract)		5,000 00
Edward J. and Elizabeth Soderlund, private land off Winter street, West Roxbury		100 00
H. C. Corbin, Itasca street, Dorchester		300 00
Laura Gould, Itasca street, Dorchester		45 00
		<hr/>
		\$7,434 00

EAST BOSTON PUMPING STATION AND OUTLET.

Engineers' salaries		\$1,867 06
Borings		179 17
Advertising		37 38
		<hr/>
		\$2,083 61

Summary of Sewer Construction for Twelve Months Ended December 31, 1927.

DISTRICT.	Built by City by Contract or Day Labor.	Built by Private Parties.	Total Length Built.	
	Linear Feet.	Linear Feet.	Linear Feet.	Miles.
City proper.....	1,305.46	183.72	1,489.18	0.282
Roxbury.....	1,649.80	.....	1,649.80	0.312
South Boston.....	439.52	186.72	626.24	0.119
East Boston.....	226.00	177.00	403.00	0.076
Charlestown.....	38.25	.....	38.25	0.007
Brighton.....	8,600.86	1,356.54	9,957.40	1.886
West Roxbury.....	40,738.80	151.39	40,890.19	7.744
Dorchester.....	23,371.78	9,643.87	33,015.65	6.253
Hyde Park.....	10,828.67	.....	10,828.67	2.051
Totals.....	87,199.14	11,699.24	98,898.38	18.730

Net Increase in Length of Sewers Between January 1, 1927, and December 31, 1927.

DISTRICT.	Length of Sewers Built During the Twelve Months Ended December 31, 1927.	Length of Sewers Re- built or Abandoned During the Twelve Months. Ended December 31, 1927.	Net Increase for Twelve Months Ended December 31, 1927.	
	Linear Feet.	Linear Feet.	Linear Feet.	Miles.
City proper.....	1,489.18	456.31	1,032.87	0.196
Roxbury.....	1,649.80	7.00	1,642.80	0.310
South Boston.....	626.24	.....	626.24	0.119
East Boston.....	403.00	226.00	177.00	0.034
Charlestown.....	38.25	.....	38.25	0.007
Brighton.....	9,957.40	761.88	9,195.52	1.741
West Roxbury.....	40,890.19	40.85	40,849.34	7.737
Dorchester.....	33,015.65	951.58	32,064.07	6.073
Hyde Park.....	10,828.67	.....	10,828.67	2.051
Totals.....	98,898.38	2,443.62	96,454.76	18.268

Total Length of Sewers.	Miles.
Common sewers and surface drains previous to January 1, 1927.....	1,010.32
Net increase of common sewers and surface drains between January 1, 1927, and December 31, 1927.....	18.27
Total common sewers and surface drains to December 31, 1927.....	1,028.59
Intercepting sewers connecting with Metropolitan sewers to December 31, 1927.....	* 6.81
Boston main drainage intercepting sewers to December 31, 1927.....	* 24.12
Grand total of common and intercepting sewers to December 31, 1927,	1,059.52
Total mileage of streets containing sewerage works to December 31, 1927,	619.90

* No additional lengths during the year 1927.

Summary of Sewer Construction for Five Years Previous to December 31, 1927.

	1923.	1924.	1925.*	1926.	1927.
	<i>Linear Feet.</i>	Linear Feet.	Linear Feet.	Linear Feet.	Linear Feet.
Built by city by contract or day labor.....	41,076.39	50,708.89	75,241.99	72,958.49	87,199.14
Built by private parties.....	2,609.10	4,566.88	10,296.40	4,009.55	11,699.24
Totals.....	43,685.49	55,275.77	85,538.39	76,968.04	98,898.38

* Fiscal year changed to end December 31. Data is for eleven (11) months only.

Catch-basins in Charge of Sewer Division.

DISTRICTS.	CATCH-BASIN DATA FOR TWELVE MONTHS ENDED DECEMBER 31, 1927.			TOTAL FOR WHOLE CITY IN CHARGE OF SEWER DIVISION.	
	Number Built or Rebuilt.	Number Abandoned or Removed.	Net Increase.	Previous Report to January 1, 1927.	Grand Total to January 1, 1928.
City proper.....	101	80	21	3,402	3,423
Roxbury.....	69	25	44	3,012	3,056
South Boston.....	53	13	40	1,281	1,321
East Boston.....	9	.....	9	925	934
Charlestown.....	11	.....	11	775	786
Brighton.....	46	.....	46	1,457	1,503
West Roxbury.....	116	2	114	2,404	2,518
Dorchester.....	220	8	212	3,777	3,989
Hyde Park.....	57	8	49	410	459
Totals.....	682	136	546	17,443	17,989

Table of Approximate Quantities, Lifts and Duties at Calf Pasture Pumping Station, from January 1, 1927, to December 31, 1927, Inclusive.

MONTH.	Total Gallons Pumped.	Average per Day Gallons.	Minimum per Day Gallons.	Maximum per Day Gallons.	Average Lift, Feet.	AVERAGE DAILY DUTY IN MILLION FOOT-POUNDS.		
						Per 100 Pounds Coal.	Per Gallon Oil.	Per Kilowatt Hour.
January.....	3,878,871,216	123,125,590	112,895,784	149,509,576	35.4	.....	6.0	2.6
February.....	3,687,662,910	131,702,245	118,790,540	130,437,332	35.4	.....	5.8	2.0
March.....	3,798,278,372	122,234,756	120,001,404	155,346,624	35.4	.....	5.6	2.2
April.....	3,234,545,292	107,818,176	99,164,372	141,392,495	35.4	57.5	.....	1.7
May.....	3,654,263,294	117,879,461	95,103,240	145,636,136	35.4	56.2	.....	2.2
June.....	3,450,679,324	115,022,644	119,597,308	149,805,236	35.4	52.5	.....	2.2
July.....	3,605,967,062	116,321,518	94,494,844	142,914,936	35.4	53.5	.....	1.9
August.....	4,081,863,910	131,672,297	90,435,384	159,282,720	35.4	50.8	.....	2.1
September.....	4,457,070,888	143,776,480	120,736,520	173,615,392	35.4	47.0	.....	2.2
October.....	3,824,157,507	123,359,920	74,578,773	169,428,301	35.4	54.0	7.4	2.1
November.....	3,431,502,523	114,383,417	91,043,172	125,442,730	35.4	.....	6.8	1.7
December.....	3,664,678,295	118,215,429	88,796,335	123,442,730	35.4	.....	7.0	2.7
Totals.....	44,760,560,593	1,467,511,903	.....	.....	.....	371.5	38.6	25.6
Averages.....	123,631,673	122,292,654	.....	.....	.....	53.1	6.4	2.1

Note.—11,736,620,330 gallons pumped by coal; 3,222 tons used.
13,116,508,263 gallons pumped by oil; 508,616 gallons used.
19,907,423,000 gallons pumped by electric power; 2,882,900 K. W. hours.

44,760,560,593

Cost of Pumping at Calf Pasture Pumping Station January 1, 1927, to December 31, 1927, Inclusive.

ITEMS.	Cost.	Cost per Million Foot Gallons.
Labor.....	\$87,987 50	\$0.05553
Fuel oil.....	26,764 95	.01689
Electric power.....	44,552 26	.02812
Coal.....	23,940 38	.01511
Oils and waste.....	1,829 94	.00115
Rubber valves and packing.....	2,123 67	.00135
Miscellaneous supplies and renewals.....	11,614 42	.00733
Cleaning No. 1 and No. 2 wells.....	7,020 00	.00443
Major repairs on No. 5 engine.....	33,720 48	.02128
 Totals.....	\$239,553 60	\$0.15119
Labor at screens.....	8,138 00	.00513

Sludge Deposited and Removed from Deposit Sewers at Calf Pasture Pumping Station from January 1, 1927, to December 31, 1927, Inclusive.

	North Sewer Cubic Yards.	South Sewer Cubic Yards.	Total, Cubic Yards.
Sludge in sewers on January 1, 1927.....	1,295	897	2,192
Sludge deposited during the year 1927.....	782	308	1,090
 Totals.....	2,077	1,205	3,282
Sludge removed during year 1927.....	1,624	729	2,353
 Sludge in sewers on January 1, 1928.....	453	476	929

Amount of Refuse Removed from Screen Hoist at Calf Pasture Pumping Station, January 1, 1927, to December 31, 1927, Inclusive.

MONTH.	Number Cheeses.	Weight (Pounds.)
January.....	145	34,945
February.....	136	32,776
March.....	128	30,848
April.....	154	37,114
May.....	142	34,222
June.....	118	28,438
July.....	123	29,643
August.....	89	21,449
September.....	83	20,003
October.....	137	33,017
November.....	127	30,607
December.....	138	33,258
Totals.....	1,520	366,320

Cheeses average 241 pounds.

APPENDIX F.

REPORT OF THE DIVISION ENGINEER OF
THE WATER DIVISION.

BOSTON January, 1, 1928.

To the Commissioner of Public Works:

The following report of the operation, income and expenditures of the Water Division for the year ending December 31, 1927, is respectfully submitted.

During the year building construction and continued property development, principally in Dorchester and West Roxbury, called for the laying of 9.63 miles of 6-inch to 16-inch water pipe; 3.3 miles were laid in Dorchester, 3.8 miles in West Roxbury and one mile in Hyde Park. A contract for laying 4,000 linear feet of 48-inch water pipe in Charles street, Columbus avenue and Arlington street, awarded in October 1926, and on which work had ceased at the end of the working season in 1926, was completed during the year by the laying of 2,700 linear feet of 48-inch pipe with the exception of the installation of the steel pipe in the tunnel under the railroad tracks at Arlington square. This supply main was occasioned by the abandonment of the two 30-inch water mains in Tremont street, between Appleton and Boylston streets, as a consequence of the Tremont street widening, which necessitated the removal of the older mains formerly carried over the New York, New Haven & Hartford Railroad and the Boston & Albany Railroad tracks by an independent pipe bridge. The unsatisfactory location of the water mains in Tremont street, between Warrenton and Stuart streets was also a factor in selecting a new location for the new water main to replace these mains to be abandoned. The construction of the reinforced concrete tunnel 8 feet 6 inches in diameter with steel pipe shafts 10 feet in diameter, the tunnel depth under the railroad tracks being 40 feet below said tracks and in which the 48-inch main will be laid, was not completed until December 1,

although work started in February, consequently the laying of the water pipe in the tunnel which completes the work under contract could not be finished. Early in the coming spring the 48-inch supply main replacing the 30-inch mains mentioned above will be in service.

The construction of the Southern Artery by the Commonwealth of Massachusetts, presented the opportunity to complete the 24-inch supply main strengthening the distribution system of Neponset and the southern section of Dorchester, and 3,100 linear feet of 24-inch pipe was laid in the Artery connecting the 24-inch main ending at Adams street and Minot street with the 36-inch main running through Washington street, Dorchester. The Dock square widening allowed the relaying of 750 linear feet of the old 24-inch main laid in 1849, with new cast-iron 24-inch pipe. The old pipe showed a serious state of deterioration after being buried in the salt marsh soil for eighty years.

The demand for pipe extensions prevented the relaying of small sized water pipes with larger sizes to the amount of the yearly program of about 5 miles. During the year only 13,960 linear feet or 2.6 miles of 4-inch and 6-inch pipe was relaid with 8-inch and 12-inch pipe for the purpose of improving the fire protection and furnishing the quantity of water demanded by the modern type of fire engines.

Among the greater lengths relaid were:

SOUTH BOSTON.

D street, between Bells court and Second streets, 2,269 linear feet of 12 inch relaid with 12-inch pipe. This pipe was laid in 1849 and at points was 9 feet deep.

CITY PROPER.

Mason street, between West and Avery streets, 257 linear feet of 6-inch relaid with 12-inch pipe.

Grenville place, off Columbus avenue, 140 linear feet of 6-inch relaid with 12-inch pipe.

Warrenton street, between Tremont and Stuart streets, 508 linear feet of 6-inch relaid with 12-inch pipe.

DORCHESTER.

Glide street, between Oak avenue and Minot street, 302 linear feet of 6-inch relaid with 8-inch pipe.

Southern Artery, between Grayson street and Cushing Hill road, 729 linear feet of 8-inch relaid with 12-inch pipe.

HYDE PARK.

Arlington street, between Providence street and Hyde Park avenue, 419 linear feet of 4-inch relaid with 8-inch pipe.

Metropolitan avenue, between River and Westminster streets, 1,225 linear feet of 6-inch relaid with 12-inch pipe.

Glenwood avenue, between Beaver and Child streets, 230 linear feet of 6-inch relaid with 12-inch pipe.

Cleveland street, between Child and Beaver streets, 330 linear feet of 6-inch relaid with 12-inch pipe.

Sunnyside street, between Franklin and Church streets, 938 linear feet of 4-inch relaid with 12-inch pipe.

Thompson street, between Glenwood and Franklin streets, 520 linear feet of 4-inch relaid with 12-inch pipe.

Franklin street, between Thompson street and Sunnyside, 361 linear feet of 4-inch relaid with 12-inch pipe.

The construction of the Southern Artery, River street, etc., in consequence of the drastic grade changes called for the lowering, raising and relocating of 7,150 linear feet of 6-inch, 8-inch and 12-inch pipes.

Twenty-eight contracts were awarded at various times during the year to care for the applications for main pipe extension as received.

Service pipes to the number of 2,228, varying in size from $\frac{5}{8}$ -inch to 12-inch were installed during the year and of this number 118 were 4-inch pipes laid to provide sprinkler protection.

The regular work of the Distribution Branch, consisting of leaks, repairs, establishing fire and service pipes, freeing stoppage, shutting off and letting on water, etc., was performed in such a manner and at such times as to provide a minimum of delay and discomfort to applications for water, to water takers and to the traveling public; practically all our work in the business section is now done on Sundays to meet the above conditions.

The Legislative Acts of 1907, were complied with and 521 meters were set on old services in existence previous to 1907, and 1,940 meters were set on new services, a total of 2,461 meters. On December 31, 1927, the

total number of meters in service was 93,857, and there remains to meter about 1,000 miscellaneous houses in various sections of the city. With 99 per cent of Boston metered, the work performed by the Meter Branch has increased and 8,784 meters have been changed and reset and 2,319 meters have been repaired in service, in addition to the installations on new and old services.

The collections for all purposes in the Water Division were \$4,080,772.65 and the statute making water bills a lien on real estate is an important factor in having the bills paid and paid promptly.

Respectfully submitted,

C. J. CARVEN,
Division Engineer.

FINANCIAL STATEMENT.

RECEIPTS.

Sales of water	\$3,913,117 06
Service pipes new and repairs	107,146 28
Fire motor and elevator pipes new and repairs	31,566 11
Sales of merchandise	7,257 08
Fees for summonses	7,157 13
Labor and materials for miscellaneous	3,737 13
Damages and repairs to hydrants	3,100 35
Shutting off and letting on water	2,734 00
Interest on bank deposits	2,321 65
Premium on water loans	1,094 20
Board of horses	546 00
Interest on water loans	447 22
Testing water meters	288 75
Delivering water	139 49
Rent of conduit, Congress street	100 00
Sales of old materials	20 00
Penalty on coal	20
 Gross income	\$4,080,772 65
Transferred to City Loan account to pay Hyde Park Water Debt	\$16,000 00
Transferred to appropriation for Service Mains and Relaying Mains	90,000 00
Transferred to credit of Collecting Depart- ment	53,356 03
	159,356 03
 Net income	\$3,921,416 62
Balance January 1, 1927	27,914 62
	 \$3,949,331 24

EXPENDITURES.

Current expenses and extensions	\$1,483,018 23
Interest on water loans	52,940 00
Serial loans	200,000 00
Refunded water rates	1,052 80
Metropolitan water assessn.ent	2,155,188 41
 Total expenditures 1927	3,892,199 44
 Balance December 31, 1927	\$57,131 80

APPROPRIATION FOR SERVICE MAINS AND RELAYING MAINS.

Balance unexpended January 1, 1927	\$7,864 99
Appropriation from Water Income May 1927	90,000 00
 Total appropriation 1927	\$97,864 99
Expended during fiscal year 1927	71,595 99
 Balance unexpended December 31, 1927	\$26,269 00

APPROPRIATION FOR EXTENSION OF WATER MAINS (LOAN).

Balance unexpended January 1, 1927	\$238,566 12
Loan issued in 1927	200,000 00
<hr/>	
Total appropriations 1927	\$438,566 12
Expended during fiscal year 1927	282,524 21
<hr/>	
Balance unexpended December 31, 1927	\$156,041 91
<hr/>	

APPROPRIATION FOR LAYING AND RELAYING STREET WATER MAINS (LOAN).

Balance unexpended January, 1 1927	\$19,824 84
Expended during fiscal year 1927	13,244 66
<hr/>	
Balance unexpended December 31, 1927	\$6,580 18
<hr/>	

Details of expenditures under appropriation for current expenses for the fiscal year 1927.

EXTENSION.

Construction of new mains	\$163,117 25
Replacement of old mains	53,601 12
New hydrants	7,213 75
<hr/>	
Total extension	\$223,932 12

MAINTENANCE.

Office and Engineering Branch:	
Salaries and wages	\$48,419 21
Traveling expenses	864 57
Printing, stationery and postage	3,743 13
Miscellaneous	804 86
	<hr/>
	\$53,831 77
Income Branch:	
Salaries and wages	\$149,127 30
Traveling expenses	2,196 06
Printing, stationery and postage	4,498 53
Miscellaneous	2,257 01
	<hr/>
	158,078 90

Distribution Branch:	
Salaries and Wages	\$42,921 45
Traveling expenses	403 18
Printing, stationery and postage	1,092 73
Miscellaneous	2,555 06
	<hr/>
	46,972 42

Meter Branch:	
Salaries and wages	\$18,038 25
Traveling expenses	41 76
New meters and setting	28,424 52
Meters, repairing, resetting, testing, etc.	53,591 94
Printing, stationery and postage	303 16
	<hr/>
Carried forward	\$100,399 63
	\$258,883 09
	<hr/>
	\$223,932 12

<i>Brought forward</i>	..	\$100,399	63	\$258,883	09	\$223,932	12
Holiday	..	5,216	57				
Shops	..	18,087	83				
Laborers' Vacations	..	853	11				
Miscellaneous	..	170	42				
				124,727	56		
Inspection of castings	..			7,821	70		
Yards	..			95,094	56		
Damages	..			22,038	13		
Shops	..			26,000	21		
Stables	..			6,524	65		
Tools and repairs	..			15,018	51		
Main pipe relocation	..			15,737	14		
Maine pipe repairs	..			88,509	88		
Service pipes, new	..			114,176	53		
Service pipes, changes	..			14,023	87		
Service pipes, repairs	..			128,279	06		
Hydrant, changes	..			34,296	77		
Hydrant, repairs	..			70,106	85		
Water posts, changes	..			320	97		
Water posts, repairs	..			963	50		
Fountains, new	..			256	57		
Fountains, changes	..			540	73		
Fountains, repairs	..			2,584	37		
Fountains, on account of ice	..			1,784	40		
Holiday	..			61,957	54		
Investigations	..			1,481	20		
Off and on water	..			19,819	36		
Accommodation work	..			4,254	18		
Work on account of office and engineer's branch	..			2,910	01		
Work on account of Income Branch	..			783	18		
Work on account of new meters	..			4,351	37		
Work on account of meter repairs	..			11,128	29		
Work on account of Meter Branch	..			1,419	26		
Waste detection and prevention	..			110	10		
Launch, repairs and supplies	..			1,088	30		
Harbor Service	..			3,769	03		
Veterans' pensions	..			6,633	41		
Laborers' pensions	..			8,644	20		
Laborers' vacations	..			21,282	86		
Workmen's Compensation	..			4,477	05		
Emergency service	..			67,898	77		
Garage	..			6,763	09		
Medical inspection	..			600	00		
Light and power	..			1,721	17		
High Pressure Fire Service	..			3,136	20		
Veterinary's services	..			125	00		
Regulating boxes	..			6,357	26		
Expert services	..			1,106	90		
Taxes	..			280	05		
Delivering water	..			9	95		
Automobiles	..			50,403	49		
Total maintenance	..					1,320,200	27
Mechanise sold and stock consigned to junk	..					6,135	34
Stock purchased	..					320,774	70
Less stock used and disposed of	..					\$1,871,042	43
Total expenditures from appropriation for current expenses	..					388,024	20
						\$1,483,018	23

Receipts and Expenditures, 1918-1927.

Receipts.

	1918-19.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	1924-25.	1925. (11 months.)	1926.	1927.
Sales of water.....	\$2,998,922 73	\$3,244,542 57	\$3,361,937 04	\$3,407,579 24	\$3,694,448 30	\$3,813,571 42	\$3,748,575 28	\$3,079,830 74	\$3,790,408 27	\$3,913,117 06
Other receipts.....	50,529 81	54,111 33	64,598 71	65,479 69	97,499 70	97,164 30	182,317 83	161,277 84	210,580 90	167,655 59
	\$3,049,452 54	\$3,298,653 90	\$3,429,535 75	\$3,473,058 93	\$3,791,948 00	\$3,910,735 72	\$3,930,893 11	\$3,241,108 58	\$4,000,989 17	\$4,080,772 65
Loan, extension of water mains.....								800,000 00	300,000 00	200,000 00
Loan, laying and relaying street water mains.....								100,000 00		
	\$3,049,452 45	\$3,298,653 90	\$3,429,535 75	\$3,473,058 93	\$3,791,948 00	\$3,910,735 72	\$3,930,893 11	\$4,141,108 58	\$4,300,989 17	\$4,280,772 65
Balance, beginning of year.....	\$25,087 31	* \$3,487 83				* \$43,733 95	* \$200,000 00	\$24,141 18	\$26,737 35	\$375,840 01
Balance, end of year.....	* 3,487 83					\$43,733 95		24,141 18	26,737 35	* 375,840 01
Transferred to Collecting Department.....	26,165 88	30,317 74	\$33,570 54	34,596 76	46,425 42	50,522 49	58,653 86	51,800 79	55,622 61	53,356 03
Transferred to city loan account.....	124,263 90	390,095 22	209,958 26	161,000 00	250,233 01	113,570 40	16,000 00	10,000 00	16,000 00	16,000 00
Transferred to appropriation for service mains and relaying mains.....	30,000 00					200,000 00	208,180 00	217,638 84	50,123 45	90,000 00
Transferred to appropriation for High Pressure Fire Service.....						24,000 00				
Transferred to appropriation for High Pressure Fire system extension.....						100,000 00	410,000 00	175,000 00		

Expenditures.

	1918-19.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	1924-25.	1925. (11 months.)	1926.	1927.
Current expenses.....	\$1,055,842 87	\$1,010,634 32	\$1,253,166 33	\$1,232,418 76	\$1,396,212 50	\$1,229,573 73	\$1,608,320 10	\$1,309,163 72	\$1,511,407 58	\$1,483,008 23
Service mains and relaying mains.....	51,509 48	3,487 83				384,038 82	215,042 67	75,930 69	\$3,065 12	71,595 99
Metropolitan water assessment.....	1,741,008 84	1,805,104 07	1,885,924 91	1,958,528 33	1,784,257 21	1,872,413 17	1,829,973 63	1,793,425 93	2,090,598 07	2,155,188 41
Interest.....	71,268 00	61,162 73	45,874 33	41,852 66	34,149 49	25,534 00	24,680 00	9,800 00	45,280 00	52,940 00
Refunded water rates.....	962 99	1,339 82	1,041 38	928 47	1,104 32	941 93	626 68	527 48	343 50	1,052 80
Loan, extension of water mains.....								515,178 10	346,255 78	282,524 21
Loan, laying and relaying street water mains.....								26,080 21	54,085 95	13,244 66
On account of serial loans.....								150,000 00	200,000 00	
	\$2,929,682 18	\$2,881,728 77	\$3,186,006 95	\$3,233,728 22	\$3,216,023 52	\$3,512,501 65	\$3,678,643 05	\$3,730,115 13	\$4,311,036 00	\$4,259,564 30

* Balance of appropriation for service mains and relaying mains.

† \$57,131.80 of this amount is balance of appropriation for "Water Service"; \$26,269 of this amount is balance of appropriation for "Service Mains and Relaying Mains Revenue"; \$156,041.91 of this amount is balance of appropriation for "Extension of Water Mains (Loan)"; \$6,580.18 of this amount is balance of appropriation for "Laying and Relaying Street Water Mains (Loan)".

‡ Amount expended for current expenses and extensions, there being one appropriation only.

Details of expenditures under appropriation for Service Mains and Relaying Mains for the fiscal year 1927.

EXTENSION.	
Construction of new mains	\$37,377 98
Replacement of old mains	22,486 50
Total extension	\$59,864 48
MAINTENANCE.	
Main pipe, relocation	\$314 52
Main pipe, repairs	599 29
Service pipes, new	9,732 90
Service pipes, changes	42 50
Service pipes, repairs	950 38
Hydrant repairs	51 96
Off and on water	39 96
Total maintenance	11,731 51
Total expenditures from appropriation for Service Mains and Relaying Mains	<u>\$71,595 99</u>

Details of expenditures under appropriation for Extension of Water Mains for the fiscal year 1927. (From loan.)

Construction of new mains.....	\$285,616 46
Service pipes, new	3,071 27
Stock purchased	72,308 72
	<u>\$360,996 45</u>
Less stock used and debit transfer from 1926,	72,472 24
Total expenditures from appropriation for Extension of Water Mains	<u>\$282,524 21</u>

Details of expenditures under appropriation for Laying and Relaying Street Water Mains for the year 1927. (From loan.)

Construction of new mains	\$11,538 69
Replacement of old mains	1,058 29
Service pipes, new	647 68
Total expenditures for the year 1927	<u>\$13,244 66</u>

APPROPRIATION FOR DOCK SQUARE AND FANEUIL HALL SQUARE IMPROVEMENT.

Laying and relaying water mains on account of street widenings	<u>\$1,972 57</u>
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APPROPRIATION FOR KNEELAND STREET IMPROVEMENT.

Laying and relaying water mains on account of street widening	<u>\$2,751 45</u>
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RESERVE FUND.

Expenditures for ice furnished at drinking fountains	<u>\$4,602 14</u>
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COST OF CONSTRUCTION AND CONDITION
OF WATER DEBT.

Cost of construction to December 31, 1927	\$21,290,135 91
Cost of construction to December 31, 1926	20,710,570 44
Increase during the year	<u>\$579,565 47</u>
Outstanding loans December 31, 1926	\$1,244,000 00
Outstanding loans December 31, 1927	1,228,000 00
Decrease during the year	<u>\$16,000 00</u>
Cost of existing works December 31, 1927:	
Pipe, yards and buildings	\$94,832 16
Engineering expenses	57,873 58
Distribution system (additions during year \$579,565 47)	* 20,669,430 17
Hyde Park water works	468,000 00
	<u>\$21,290,135 91</u>
High Pressure Fire System	<u>\$2,062,155 92</u>

* Includes \$85,121.50 High Pressure Fire Service Extension expended in 1925 and 1926.

INCOME BRANCH.

Table No. 1.— Statement of Each Year's Water Rates, 1912 to 1927, as of December 31, 1927.

YEAR.	Assessments.	Abatements.	Collections.	Outstanding.
1912.....	\$3,001,771 87	\$49,937 87	\$2,943,402 48	\$8,431 52
1913.....	3,004,331 52	42,088 77	2,954,183 62	8,059 13
1914.....	3,034,885 83	41,544 93	2,970,232 82	23,108 08
1915.....	2,960,797 45	15,084 24	2,903,015 36	42,697 85
1916.....	3,130,590 53	16,402 64	3,062,818 84	51,369 05
1917.....	3,120,878 86	19,287 29	3,043,525 11	58,066 46
1918.....	3,359,714 95	98,624 99	3,197,299 43	63,790 53
1919.....	3,210,147 91	27,111 37	3,114,335 15	68,701 39
1920.....	3,503,677 88	62,017 25	3,380,167 98	61,492 65
1921.....	3,615,663 51	34,119 41	3,524,717 28	56,826 82
1922.....	3,612,715 51	31,450 66	3,522,028 49	59,236 36
1923.....	3,817,084 26	35,464 15	3,739,213 26	12,406 85
1924.....	3,832,531 26	41,329 11	3,780,382 74	10,819 41
1925.....	3,875,434 21	37,420 53	3,821,732 36	16,281 32
1926.....	3,910,049 04	38,107 67	3,835,721 48	36,219 89
1927.....	3,974,211 79	17,983 32	2,849,162 80	1,107,065 67

Table No. 2.— Elevator, Motor and Fire Services.

Elevator services installed.....	—
Elevator services abandoned.....	—
Total number of elevator services in use December 31, 1927.....	505
Fire pipes installed.....	118
Fire pipes abandoned.....	2
Total number of fire services in use December 31, 1927.....	2,955
Number of motor services in use December 31, 1927.....	96
Number of motor services metered.....	20

METER BRANCH.

Table No. 1.—Statement of Work During Year 1927.

MAKE.	New Sets.	Discontinued.	CHANGES.		Tested.	Repaired in Shop.	Reset.s.	Repaired in Service.
			Out.	In.				
Worthington disc.....	25	63	1,490	901	4,068	992	47	76
Watch dog.....	2,270	133	1,163	2,867	4,729	1,343	167	776
King.....	49	83	1,793	1,872	3,718	2,052	74	574
Hersey disc.....	84	281	3,641	2,907	7,647	3,296	111	707
Hersey rotary.....	9	8	121	34	259	58	.....	8
Crown.....	5	20	135	20	295	17	1	7
Nash.....	4	5	73	36	255	44	.....	15
Lambert.....	7	4	46	29	103	54	1	.....
Keystone.....	.....	2	23	20	48	20	2	.....
Trident.....	.....	2	26	15	54	29	3	21
Hersey compound.....	.....	.....	2	2	.....	.....	.....	7
Hersey detector.....	6	1	5	6	.....	.....	.....	9
American.....	1	8	184	44	377	184	6	100
Federal.....	1	5	82	31	170	27	1	19
Totals.....	2,461	615	8,784	8,784	21,723	8,118	413	2,319

Table No. 2.

Meters in Service December 31, 1927.

MAKE.	DIAMETER IN INCHES.												Totals.
	$\frac{5}{8}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2	3	4	6	8	10	12		
Hersey disc.....	42,229	3,141	1,395	710	278	95	66	5					47,919
Worth disc.....	8,764	38	12	38	68	58							8,978
Watch dog.....	17,720	553	723	407	245	118	30						19,796
King.....	10,510	393	81	63	57								11,104
Hersey rotary.....	317	274	172	137	158	53	22	15					1,148
Crown.....	336	425	178	127	137	40	37	8					1,288
Nash.....	330	36	94	12	2	2							476
Lambert.....	270	95	76	17	15		4						477
Trident.....	159	3	3	4	4	14	5	2					194
Hersey detector.....						5	23	33	13	18	4		96
Old Worthington.....		8	25	1	8	11	1						54
Keystone.....	169	170	23	1	1	6							370
Metropolitan.....		12	1										13
American.....	80	454											534
Empire.....	105												105
Protectus.....							2	1	2	2			7
Gem.....					1			2					3
Standard.....	4												4
Thomson.....	6	2											8
Hersey compound.....							3	7					10
Federal.....	1,273												1,273
Totals.....	82,272	5,604	2,783	1,517	974	402	193	73	15	20	4		93,857

Table No. 1.
Showing Length of Water Pipes and Connections Owned and Operated by the Public Works Department, Water Division (Water Service) and Number of Valves in same December 31, 1927.

	Diameter of Pipes in Inches.												Totals.				
	48	42	40	36	30	24	20	16	14	12	10	8					
Length owned and operated December 31, 1926.....	17,798	15,980	16,081	43,644	91,819	81,414	86,520	288,120	5,041	1,605,097	444,538	955,231	1,128,826	85,357	9,442	6,773	4,884,681
Gate valves in same.....	16	4	9	20	57	76	72	655	19	4,233	1,485	3,249	3,599	569	16	17	14,096
Air valves in same.....	28	5	9	34	108	75	43	46	34	48	1	3	1	1	1	1	431
Blow-offs in same.....	3	4	3	11	34	28	46	66	.....	164	44	122	129	58	7	7	721
Length laid and replaced during 1927.....	2,275	.....	.....	136	.....	3,784	841	2,702	.....	31,911	2,023	31,393	1,317	9	.....	126	76,517
Gate valves in same.....	1	.....	.....	2	1	1	1	15	108	15	152	10	10	3	.....	307	
Air valves in same.....	5	.....	.....	1	1	3	2	2	.....	1	.....	5	.....	5	.....	11	
Blow-offs in same.....	2	.....	.....	.....	.....	2	2	2	.....	6	.....	12	.....	5	.....	29	
Length abandoned during 1927.....	.....	.....	.....	1,420	.....	762	620	26	.....	7,514	171	1,744	6,417	2,030	.....	230	20,334
Gate valves in same.....	.....	.....	.....	1	1	1	1	1	.....	14	2	7	38	5	.....	67	
Blow-offs in same.....	.....	.....	.....	1	2	1	1	1	.....	8	2	7	3	3	.....	22	
Air valves in same.....	.....	.....	.....	1	1	1	1	1	.....	.....	.....	.....	.....	.....	.....	4	
Length owned and operated December 31, 1927.....	20,073	15,980	16,081	43,780	90,389	84,436	86,741	290,796	5,041	1,629,494	446,390	984,880	1,123,726	83,336	9,442	6,669	4,937,264
Gate valves in same.....	17	4	9	20	56	78	73	670	19	4,327	1,498	3,394	3,571	567	16	17	14,336
Air valves in same.....	33	5	9	34	107	78	42	75	33	49	1	3	1	1	1	1	438
Blow-offs in same.....	5	4	3	11	33	30	46	67	.....	162	42	127	131	58	7	7	728

Total 935.09 miles in system.

Table No. II.

Total Number of Hydrants in System December 31, 1927.

	Lowry.	Boston Lowry.	Boston Post.	Ordinary Post.	Bachelder and Finneran Post.	Ludlow Post.	Chapman Post.	Coffin Post.	Matthews Post.	Boston.	Totals.
City proper (public).....	470	36	500	251	207	...	...	...	...	53	1,517
" (private).....	4	...	9	6	...	...	...	...	...	39	58
Roxbury (public).....	255	52	427	322	460	...	...	...	...	13	1,529
" (private).....	2	1	3	4	...	...	...	...	...	10	20
West Roxbury (public).....	21	152	492	986	330	...	...	...	...	13	1,994
" (private).....	...	...	...	15	1	...	...	...	...	1	17
Brighton (public).....	19	41	275	513	140	...	...	...	...	12	1,000
" (private).....	...	...	...	8	...	...	...	...	...	2	10
Dorchester (public).....	190	123	683	1,151	292	...	...	...	...	17	2,456
" (private).....	...	1	8	...	2	...	...	...	...	4	15
South Boston (public).....	106	19	251	184	89	...	...	...	...	14	663
" (private).....	3	1	...	15	...	...	...	...	...	27	46
East Boston (public).....	25	15	207	229	54	...	...	...	...	6	536
" (private).....	8	1	...	9	...	...	...	...	...	25	43
Charlestown (public).....	76	34	141	65	29	...	...	...	...	2	347
" (private).....	13	1	...	37	...	...	...	...	...	5	56
Hyde Park (public).....	...	...	19	332	84	7	116	1	...	...	559
" (private).....	...	...	...	...	...	13	55	4	...	...	72
Deer Island (private).....	...	...	1	19	...	...	...	...	...	...	20
Long Island (private).....	...	...	...	6	...	...	...	...	...	...	6
Thompson's Island (private).....	...	...	...	2	...	...	...	...	...	...	2
Gallup's Island (private).....	...	...	...	3	...	...	...	...	...	1	4
Rainsford Island (private).....	...	...	...	3	...	...	...	...	...	...	3
Quiney.....	...	...	...	9	...	...	...	...	...	...	9
Total number (public).....	1,162	472	2,995	4,033	1,685	7	116	1	...	130	10,601
Total number (private and suburban).....	30	5	21	136	3	13	55	4	114	381	

*Total Number and Aggregate Length of Service Pipes of Various Sizes
Connected with System December 31, 1927.*

SIZE.	TOTAL NUMBER.	AGGREGATE LENGTH IN LINEAR FEET.
1/2-inch.....	6,897	158,251
5/8-inch.....	91,899	2,530,904
3/4-inch.....	3,600	124,182
1-inch.....	5,774	204,943
1 1/4-inch.....	632	18,057
1 1/2-inch.....	1,834	54,356
2-inch.....	2,376	71,762
2 1/2-inch.....	12	267
3-inch.....	1,057	29,300
4-inch.....	3,505	91,430
6-inch.....	225	24,275
8-inch.....	72	4,596
10-inch.....	15	1,771
12-inch.....	20	4,005
16-inch.....	5	448
TOTALS.....	* 117,923	3,318,547

* The completion of the metering of all services to within 1 per cent of the total number of live service pipes discloses the fact that the total number of service pipes will not exceed 95,000. The large discrepancy is found to be due to the fact that previous to 1880 no deductions were made for pipes abandoned, etc.

Cost of Extension of Main Pipe.

STREET.	Location.	District.	($\frac{\text{sq. yds.}}{\text{sq. ft.}}$)	Cost of Department-Materials, etc.	Cost of Labor.	Cost of Inspection.	Total Cost.	Remarks.
Bills court.....	From Ruggles street.....	Roxbury.	2	170	\$274 99	\$200 77	.....	\$475 76 Private work.
Huntington avenue.....	Muddy river.....	Roxbury.	6	47	\$241 89	\$303 94	.....	\$545 83 Private work.
Zanora court.....	Zanora street.....	Roxbury.	6	185	243 17	218 21	\$6 11	467 49 Private, gravel.
Summer terrace.....	Summer street.....	Dorchester.	6	183	302 15	213 93	9 59	525 67 Public, under construction.
Cornell street.....	Bellevue street.....	Dorchester.	6	193	300 99	284 40	21 01	606 43 Private, gravel and rock.
Francis park.....	Savin Hill avenue.....	Dorchester.	6	200	321 60	321 00	40 74	683 34 Private, rock.
Proposed street.....	Stratford street near Woodward avenue.	West Roxbury.	6	20	88 87	20 00	3 20	112 07 Private, clay.
Goldsmith street.....	St. Joseph street.....	West Roxbury.	6	63	142 03	61 60	8 25	211 88 Private, sand.
Wilson park.....	Commonwealth avenue.....	Brighton.	6	379	613 29	376 20	40 26	1,059 75 Private work.
Totals.....		City Proper.	6	1,272	\$2,283 99	\$1,739 28	\$129 19	\$4,212 46
Merchants row.....	South Market and Chatham streets,	South Boston.	8	116	\$241 73	\$190 00	\$32 55	\$464 28 Public, ash filled.
Marine road and East Eighth street,	Between K and L streets.....	South Boston.	8	301	567 58	365 77	10 18	913 53 Private, gravel.
Hardy street.....	Preble and Hyde streets.....	South Boston.	8	279	458 40	327 20	76 19	861 79 Private, gravel.
Elkins street.....	Breed street.....	East Boston.	8	269	660 30	292 03	22 37	974 70 Private, gravel.
Wesley street.....	Orient avenue and Tower street.....	East Boston.	8	48	67 27	52 32	2 72	122 31 Private, clay.
Ashley street.....	Carried forward		8	421	792 73	518 58	34 62	1,345 93 Private, gravel.
Sea View avenue.....				1,434	\$2,788 01	\$1,745 90	\$178 63	\$4,712 54

Cost of Extension of Main Pipe.—Continued.

STREET.	Location.	District.	Feet.	Cost of Department Material, etc.	Cost of Labor.	Cost of Inspection.	Total Cost.	Remarks.
	<i>Brought forward.</i>		1,434	\$2,788 01	\$1,745 90	\$178 63	\$4,712 54	
Elbert street.....	Humboldt avenue.....	Roxbury.	8 273	641 96	1,185 50	135 75	1,963 21	Private, macadam.
Ashton street.....	Balsam street.....	Dorchester.	8 151	315 54	212 84	44 00	572 38	Private, ash.
Stone terrace.....	Southern Artery.....	Dorchester.	8 108	153 59	135 00	8 63	297 22	Private, clay.
Pleasant View street.....	Ashland street and Roanoke road.....	Dorchester.	8 98	237 44	184 14	206 38	627 96	Private, rock and clay.
Cedar Grove street.....	Halle-Davis and Whitridge streets.....	Dorchester.	8 223	497 05	241 85	5 75	744 65	Private, gravel.
Buyers road.....	Ormond street.....	Dorchester.	8 13	43 05	14 00	80	57 85	Private, clay.
Owencroft street.....	Southern Artery.....	Dorchester.	8 635	1,251 29	664 44	24 28	1,940 01	Private, filled.
Rich street.....	West Selden and Delhi streets.....	Dorchester.	8 253	508 41	358 36	20 13	886 90	Private, clay.
Delhi street.....	Rich and Woodlawn streets.....	Dorchester.	8 120	391 52	176 68	9 35	577 55	Private, clay.
Ginista street.....	Centre street.....	Dorchester.	8 194	403 83	224 70	5 43	633 96	Private, gravel.
Rangeley street.....	Milton street.....	Dorchester.	8 354	613 67	383 67	8 15	1,005 49	Private, gravel.
Gene street.....	Humphreys and Holden streets.....	Dorchester.	8 369	651 81	413 16	22 40	1,087 37	Private, ash filled.
Hosmer street.....	Blue Hill avenue and Norfolk street,	Dorchester.	8 440	867 16	805 67	.....	1,672 83	Private, ledge.
Glide street.....	Minot street and Oak avenue.....	Dorchester.	8 540	957 55	576 54	32 58	1,566 67	Public, gravel.
Emerson avenue.....	Southern Artery.....	Dorchester.	8 301	702 41	1,010 41	19 94	1,732 76	Private, clay and rock.
Dyer avenue.....	Blue Hill avenue.....	Dorchester.	8 324	553 94	315 93	21 90	891 77	Private land.
Newkirk street.....	Neponset avenue and Manley street,	Dorchester.	8 236	664 55	299 84	21 72	986 11	Private, gravel.

Wessex street.....	Weyanoke and Shenandoah streets..	Dorchester.	8 207	516 20	316 16	16 29	878 65	Public, gravel.
Shenandoah street.....	At Wessex street.....	Dorchester.	8 17	516 20	316 16	16 29	878 65	Public, gravel.
Weyanoke street.....	Wessex street.....	Dorchester.	8 49	516 20	316 16	16 29	878 65	Public, gravel.
Rosaria street.....	Chickatawbut street and Oak avenue.	Dorchester.	8 492	1,004 39	570 20	12 90	1,587 49	Private, gravel.
Butler street.....	Adams street.....	Dorchester.	8 41	367 36	140 41	15 13	522 90	Public, clay.
Blakerville street.....	Bowdoin and Olney streets.....	Dorchester.	8 244	615 18	643 61	44 73	1,303 52	Public, macadam.
Lucerne street.....	Floyd street.....	Dorchester.	8 53	215 05	93 00	15 18	323 23	Private, clay.
Cushing terrace.....	Cushing avenue	Dorchester.	8 52	68 52	91 50	.....	160 02	Private.
Codman Hill street.....	Milton avenue	Dorchester.	8 33	70 47	41 25	3 79	115 51	Private, clay.
Donald road.....	Harvard street and Blue Hill avenue.	Dorchester.	8 284	587 96	401 28	37 05	1,026 29	Private, gravel.
Duxbury road.....	River street.....	Dorchester.	8 48	67 24	237 38	3 04	307 66	Private, clay
Cushing terrace.....	Upham avenue	Dorchester.	8 12	33 51	12 00	4 32	49 83	Private, gravel.
Stone terrace.....	Southern Artery.....	Dorchester.	8 41	155 55	99 45	11 50	266 50	Private, clay.
Owencroft street.....	Southern Artery.....	Dorchester.	8 81	363 84	157 34	20 12	541 30	Private, clay filled.
Norfolk terrace.....	Norfolk street.....	Dorchester.	8 192	557 49	230 50	19 17	807 16	Private, clay filled.
Upman avenue	Cushing avenue	Dorchester.	8 188	470 78	259 09	43 12	772 99	Private, gravel.
Wihler road.....	Normandy street	Dorchester.	8 451	943 41	911 41	47 13	1,901 95	Private, gravel.
Greenmount street.....	Pleasant and Greenmount streets ..	Dorchester.	8 186	348 24	197 89	26 68	572 81	Public, under construction.
Delmont street.....	Adams street.....	Dorchester.	8 232	300 81	230 11	9 86	540 78	Private, gravel.
Columbine street.....	Blue Hill avenue	Dorchester.	8 112	247 85	157 22	45 53	450 60	Private, mixed filter.
Jacobs street.....	Jones avenue.....	Dorchester.	8 216	544 93	218 47	24 28	787 68	Private, ash filter.
Minot street.....	Opposite No. 95.....	Dorchester.	8 15	123 05	61 63	.....	184 68	Public, gravel.
Vera street.....	Southern Artery.....	Dorchester.	8 308	854 26	278 66	30 35	1,163 27	Private, clay.
<i>Carried forward.....</i>						19	\$1,495 99	\$36,222 05
						9,620	\$20,698 87	

Cost of Extension of Main Pipe.—Continued.

STREET.	Location.	District.	Feet. $\frac{\text{C} \text{u} \text{y}}{2}$	Cost of Department Materials, etc.	Cost of Labor.	Cost of Inspection.	Total Cost.	Remarks.
	<i>Brought forward</i>		9,620	\$20,698.87	\$14,327.19	\$1,195.99	\$36,222.05	
Southern Artery	Codman and Vera streets	Dorchester.	8	460	731.97	390.93	30.35	1,153.25 Public, clay.
Hunes road	Newhall avenue	Dorchester.	8	162	285.79	166.06	15.98	467.83 Private, filed.
Grayson street	Milton and Marsh streets	Dorchester.	8	636	1,430.45	674.50	38.34	2,143.29 Private, gravel.
Nevada street	Codman and Codman Hill streets	Dorchester.	8	328	806.11	345.20	30.35	1,181.66 Private, clay.
Realtor road	Weld street and Willowden road	West Roxbury.	8	305	659.67	370.76	52.47	1,082.90 Private, clay.
Sanborn avenue	Tarleton road	West Roxbury.	8	268	567.37	352.60	30.25	950.22 Private, clay.
Knoll street	Selwyn and Centre streets	West Roxbury.	8	145	413.87	208.67	35.75	658.29 Private, loan
West Saville street	Ia. Grange street	West Roxbury.	8	207	528.38	242.05	12.14	782.57 Private, clay.
Hodgdon terrace	Midvale street	West Roxbury.	8	140	304.80	221.93	12.14	538.96 Private, clay and rock.
Redgate road	La Grange and Emmons streets	West Roxbury.	8	463	1,187.62	428.62	27.50	1,643.64 Private, clay.
Pond circle	West Roxbury.	8	325	746.18	358.15	57.50	1,361.83 Private, gravel.	
Spring road	Shimson and Cottage roads	West Roxbury.	8	145	274.84	337.73	44.57	657.14 Private, clay and rock.
Cottage road	Spring road	West Roxbury.	8	32	76.25	52.30	26.60	155.15 Private, clay and rock.
Brook road	Plainfield and Forest Hills streets	West Roxbury.	8	69.4	1,255.97	625.15	31.87	1,915.99 Private, street.
Carroll street	Vernon street	West Roxbury.	8	183	395.57	192.22	25.24	613.03 Private, street.
Knoll street	Selwyn and Centre streets	West Roxbury.	8	226	452.21	216.18	24.60	692.99 Private, street.
Greenhill avenue	Malcolm road	West Roxbury.	8	215	453.29	262.27	25.56	741.12 Private, street.
Steadman street	Rossmore road	West Roxbury.	8	135	348.51	189.50	19.17	557.18 Private, street.
Pond circle, West	Pond street	West Roxbury.	8	30	293.25	.....	.....	293.25 Public, gravel.

St. Joseph street.....	Woodman street and Arborway.....	West Roxbury.	8	550	1,069 07	595 21	13 75	1,678 03	Public, under construction.
Arborway.....	At St. Joseph street.....	West Roxbury.	12	10					
Forest Hills eirde.....	Forest Hills place.....	West Roxbury.	8	266	479 76	294 06	27 50	801 32	Private, clay.
Stella road.....	Hammott road.....	West Roxbury.	8	181	466 10	207 29	18 21	691 60	Private, ashes.
Alder street.....	Roslindale avenue.....	West Roxbury.	8	30	95 03	37 50	2 28	134 81	Private, rocky.
Roslindale avenue	Walworth and Dudley streets	West Roxbury.	8	607	1,010 25	826 07	53 64	1,880 96	Public, clay and rock.
Alder street.....	Walworth street.....	West Roxbury.	8	60	147 06	82 86	4 55	234 47	Private, clay and rock.
Bullion road.....	Gretter road.....	West Roxbury.	8	492	836 43	857 23	60 38	1,751 04	Private, sandy clay.
Welles street.....	Washington street.....	West Roxbury.	8	38	161 89	41 80	11 50	215 19	Private, clay.
Craunton road	Church street and Willowdean road,	West Roxbury.	8	515	878 63	870 35	138 72	1,887 70	Private, sandy clay.
Dana road	Maple road.....	West Roxbury.	8	287	590 39	382 75	18 21	991 35	Private, rock and clay.
New Park avenue.....	Beech street and West Roxbury Parkway.....	West Roxbury.	8	375	757 53	399 20	38 34	1,195 07	Private, clay.
Walnut road.....	Dana and Chestnut roads.....	West Roxbury.	8	625	1,414 88	591 92	44 36	2,054 16	Private.
Brook road.....	Forest Hills street.....	West Roxbury.	8	25	112 27	27 50	3 04	142 81	Private, sandy.
Rhoda street.....	Central and Centre streets.....	West Roxbury.	8	150	360 51	172 60	15 17	548 28	Private, clay.
St. Peters street.....	Boylston and Paul Gore streets.....	West Roxbury.	8	303	642 66	346 23	21 72	1,010 61	Private, sandy.
Parkvale road.....	Weld street	West Roxbury.	8	399	798 00	434 50	35 15	1,267 65	Private, clay.
Wolf street.....	La Grange street.....	West Roxbury.	8	377	746 41	392 00	19 17	1,137 58	Private, clay.
Chilton road.....	Weld street	West Roxbury.	8	307	606 13	353 98	12 78	1,032 89	Private, clay.
Walworth street	Cedar and Washington streets	West Roxbury.	8	440	913 28	590 28	25 64	1,539 20	Public, clay.
Chestnut road.....	Walnut road.....	West Roxbury.	8	62	84 78	55 80	5 00	145 58	Private work.
Woodward road	West Border road	West Roxbury.	8	14	79 47	25 50	5 04	110 01	Private work.
Pond place.....	Pond street	West Roxbury.	8	243	606 67	279 62	11 38	897 67	Private work.
	<i>Carried forward.....</i>		.....	21,165	\$44,831 16	\$28,029 26		\$2,321 90	\$75,182 32

Cost of Extension of Main Pipe.—Continued.

STREET.	Location.	District.	Feet.	Cost of Department Materials, etc.	Cost of Labor.	Cost of Inspection.	Total Cost.	Remarks.	
			21,105	\$11,831 16	\$28,029 26	\$2,321 90	\$75,182 32		
Cedar road.....	Brought forward .....	.....	.....	.....	.....	.....	.....
Dana road.....	West Roxbury.	8	192	539 44	568 26	12 14	1,139 84	Private, clay.	
Doncaster street.....	West Roxbury.	8	197	471 46	135 01	21 25	627 72	Public, clay.	
Bobolink street.....	West Roxbury.	8	125	311 36	123 76	19 73	454 85	Private, sand.	
Conry circle.	West Roxbury.	8	340	550 69	926 22	134 19	1,611 10	Private, rock and gravel.	
Glade avenue.....	West Roxbury.	8	15	279 01	80 93	6 07	366 01	Private, gravel.	
At No. 19 and No. 21.....	West Roxbury.	8	61	83 45	120 00	6 39	209 84	Private, clay.	
West Saville street.....	West Roxbury.	8	274	487 92	327 72	31 95	847 59	Private, clay.	
Gretter road.....	West Roxbury.	8	210	431 38	281 23	19 17	731 78	Private, rock and clay.	
Hill street.....	Cornell and Brooks streets.....	West Roxbury.	8	134	240 74	147 40	6 39	394 53	Private, clay.
Wolf street.....	Lagrange street.....	West Roxbury.	8	679	1,216 23	711 18	53 87	2,011 28	Private, clay.
Westover street.....	Weld and Dunbar streets.....	West Roxbury.	8	384	809 82	286 70	27 75	1,124 27	Private, clay.
Clarendon avenue.....	Hillside avenue and Clarendon park, West Roxbury.	8	36	128 74	34 58	6 07	169 39	Private, clay.	
Gleniside avenue.....	Private land.....	West Roxbury.	8	86	173 64	105 80	12 78	292 22	Private, gravel.
Nut street.....	Glendale street North.....	West Roxbury.	8	171	168 00	513 57	57 67	739 84	Private land.
Private land.....	Glade, and Glenside avenues.....	West Roxbury.	8	108	202 99	213 00	19 17	435 16	Public, clay.
Reservoir road.....	Beacon street and railroad.....	Brighton.	8	36	114 13	84 00	19 17	217 30	Private, clay.
Dickinson road.....	Washington street.....	Brighton.	8	476	906 74	530 80	37 38	1,474 92	Private, ashes.
Dunklee road.....	Harriet and Madeline streets.....	Brighton.	8	1,036	2,466 51	943 18	66 85	3,476 54	Private land.
Gardner street.....	Malvern and Babcock streets.....	Brighton.	8						

Holton street.....	Brooks street and Kaneleigh road . . .	Brighton.	\$ 188	492 53	316 50	33 39	842 42	Private, gravel.
Seven Pines.....	Adamson street.....	Brighton.	\$ 8	38	133 07	31 15	5 75	169 97 Private, sand.
Coloran street.....	Adamson street.....	Brighton.	\$ 8	27	119 92	23 45	5 75	149 12 Private, sand.
Durland street.....	Hardwick street.....	Brighton.	\$ 8	226	534 85	294 58	22 37	851 80 Private, clay.
Hopewell road.....	Belhel road	Hyde Park.	\$ 353	670 69	352 50	68 29	1,091 48	Private, gravel.
Coleman street.....	Cleveland street.....	Hyde Park.	\$ 245	547 17	261 11	30 35	838 63	Private, gravel.
Jefferson street.....	Metropolitan avenue.....	Hyde Park.	\$ 47	142 83	39 20	8 25	190 28	Private, gravel.
Peasant street.....	Vose avenue and Edith street.....	Hyde Park.	\$ 392	943 01	415 32	49 50	1,107 83	Private, clay.
Hyde Park avenue.....	End of race track	Hyde Park.	\$ 82	235 13	166 70	8 35	410 18	Public, gravel.
Reservoir street.....	Milton avenue.....	Hyde Park.	\$ 375	903 04	306 18	44 79	1,254 01	Private, clay.
Providence street.....	Arlington street and railroad.....	Hyde Park.	\$ 351	889 67	365 74	24 28	1,279 69	Private, gravel.
Ray street.....	River street	Hyde Park.	\$ 54	191 33	73 75	9 59	274 67	Private, clay.
Adams street.....	River street	Hyde Park.	\$ 31	156 56	40 00	3 99	200 55	Private, gravel.
Alpine street.....	River street	Hyde Park.	\$ 48	171 03	70 63	6 39	248 05	Private, gravel.
Church street.....	River and Hillside streets	Hyde Park.	\$ 118	194 48	107 10	4 55	306 13	Private, clay.
Hillside street.....	Ellis and Church streets	Hyde Park.	\$ 150	408 26	152 10	6 07	566 43	Private, clay.
Hopewell road.....	Belhel road	Hyde Park.	\$ 8	34 33	8 00	1 60	43 93	Private, gravel.
Deforest street.....	Ashville road	Hyde Park.	\$ 48	88 21	130 50	.....	218 71	Private, land.
Violante street.....	River and Rockdale streets	Hyde Park.	\$ 440	967 10	1,211 59	97 75	2,276 44	Private, clay and rock.
Charles street.....	Church street	Hyde Park.	\$ 105	395 84	119 00	6 24	521 08	Public street.
Durant road.....	Sunnyside street	Hyde Park.	\$ 206	456 48	255 23	56 72	768 43	Private, clay.
Shirley road.....	Sunnyside street	Hyde Park.	\$ 241	584 67	267 22	68 54	920 43	Private, clay.
Totals			\$ 29,438	\$63,724 21	\$39,170 15	\$3,442 40	\$106,336 76	

Cost of Extension of Main Pipe.—Continued.

STREET.	Location.	District.	Length in Feet.	Cost of Department Materials, etc.	Cost of Labor.	Cost of Inspection.	Total Cost.	Remarks.
St. James avenue	Berkeley street	City Proper.	10	153	\$773 40	\$242 75	\$15 61	\$1,031 76 Public, granite block and concrete base.
Marsh street	Hallet street	Dorchester.	10	245	467 54	232 75	12 22	712 51 Private, gravel.
Goodale road	Blue Hill avenue and Wellington Hill street.	Dorchester.	10	341	867 01	403 99	100 63	1,371 63 Private, clay.
Whitten street	Athier and Adams streets	Dorchester.	10	449	1,046 76	487 45	27 16	1,561 37 Private, gravel.
Wilmington avenue	Southern Artery	Dorchester.	10	56	154 61	137 10	.....	291 71 Public land.
Southern Artery	Wilmington avenue	Dorchester.	16	4	.....	.....	.....	.....
Goodale road	Wellington Hill street	Dorchester.	10	96	464 52	124 23	46 00	634 75 Private, clay.
Hammond street	Stella road	West Roxbury.	10	74	389 33	111 26	18 21	518 80 Private, ash.
Parkwood terrace	Parkton road	West Roxbury.	10	111	458 10	210 20	23 08	691 38 Private, ash.
Gaffney street	Entrance to Base Ball Park	Brighton.	10	15	159 06	140 00	4 79	303 85 Private land.
Edgewater Drive	River street	Hyde Park.	10	79	362 61	103 75	20 77	427 13 Private, clay.
	Totals		10	1,623	\$5,082 94	\$2,183 48	\$268 47	\$7,514 89
Washington street	Waltham and Wilkes streets	City.	12	123	465 65	235 87	12 22	\$713 74 Public, granite block and concrete base.
Warrenton street	Tremont and Stuart streets	City.	12	515	1,819 32	725 00	88 02	2,632 34 Public, clay and granite.
Orient avenue	Tower street	East Boston.	12	178	617 90	255 06	11 54	887 50 Private, clay.
Hurleroff avenue	Alicia street	Dorchester.	12	31	111 97	31 00	80	143 77 Private, clay.
Ormona street	Outlook road and Wellington street	Dorchester.	12	469	1,482 62	494 86	79 88	2,057 36 Private, clay.
Flavia street	Chickatawbut and Oak streets	Dorchester.	12	476	1,551 97	587 20	29 87	2,169 04 Private, gravel.
Wells avenue	Dorchester Tunnel	Dorchester.	12	129	414 21	534 00	34 50	982 71 Public, gravel.

Floyd street.....	Lancaster and Callender streets	Dorchester.	12	156	495 91	365 30	163 89	1,025 10	Public, rock.
Alicia street.....	Southern Artery.....	Dorchester.	12	52	253 27	101 20	4 32	358 79	Private, clay.
Milton avenue.....	At Southern Artery.....	Dorchester.	12	37	119 86	130 43	.....	250 29	Private, land.
Charlmount street	Delmont and Franconia streets.....	Dorchester.	12	36	80 37	37 80	4 79	122 96	Private, gravel.
Owen street	At Southern Artery.....	Dorchester.	12	24	231 08	111 08	5 75	347 91	Private, clay.
Fuller street	Washington street and Milton avenue.	Dorchester.	12	705	2,158 13	1,029 91	83 07	3,271 11	Private, clay.
Oak avenue.....	Glide and Rosaria streets.....	Dorchester.	12	305	1,067 36	374 10	43 13	1,481 59	Private, mud.
Phavia street.....	At Oak avenue.....	Dorchester.	12	21	.....	.....	.....	.....	.....
Milton avenue.....	Wilington street and Southern Artery.	Dorchester.	12	569	.....	.....	.....	.....	.....
Oakridge street.....	At Southern Artery.....	Dorchester.	8	4	1,668 14	935 47	79 70	2,4683 31	Private, clay.
Colman street.....	Milton avenue	Dorchester.	8	2	.....	.....	.....	.....	.....
Southern Artery	Between Dorchester and Granite avenues.	Dorchester.	12	2,787	7,308 29	3,490 51	132 10	10,930 93	Public, under construction.
Southern Artery	Granite and Lenoxdale avenues	Dorchester.	12	119	415 08	125 25	22 68	563 01	Public, under construction.
Alicia street	Southern Artery and Coolidge road.	Dorchester.	12	927	2,825 66	1,009 28	74 28	3,909 22	Private, clay.
Russett road.....	From Weld street	West Roxbury.	12	210	652 13	361 24	42 49	1,055 86	Private, clay.
Forest Hills street	Williams street and dead end	West Roxbury.	12	751	.....	.....	.....	.....	.....
Rossmore road.....	Forest Hills street	West Roxbury.	12	15	2,646 02	1,193 50	36 42	3,875 91	Private, clay.
Williams street	Forest Hills street	West Roxbury.	12	11	.....	.....	.....	.....	.....
Stratford street.....	West Border road	West Roxbury.	12	696	1,903 47	713 00	41 54	2,658 01	Private, clay.
Sanborn avenue.....	Welland and Rumsford roads	West Roxbury.	12	753	2,157 53	789 84	37 38	2,984 75	Private, clay.
Orange street	Beech street and West Roxbury Parkway.	West Roxbury.	12	311	974 61	351 33	109 98	1,435 92	Private, clay.
<i>Carried forward</i>				12	10,467	\$31,420 55	\$13,895 26	\$11,138 35	\$46,544 16

Cost of Extension of Main Pipe.—Concluded.

STREET.	Location.	District.	($\frac{\text{Cubic}}{\text{sq yd}}$) Feet.	Cost of Department Materials, etc.	Cost of Labor.	Cost of Inspec- tion.	Total Cost.	Remarks.
Woodward road	Brought forward		12	10,467	\$31,420 55	\$13,985 26	\$1,138 35	\$46,514 16
West Border road and Stratford street.	West Roxbury.	12	294	792 32	294 03	25 56	1,111 91	Private, clay.
Weld street	West Roxbury.	12	101	418 64	110 09	22 37	551 10	Private, clay.
Addington street	West Roxbury.	12	429	1,263 59	577 59	21 57	1,862 75	Private, gravel.
LaGrange and Vermont streets	West Roxbury.	12	34	188 26	63 00	6 39	257 65	Public, clay.
Selwyn street	West Roxbury.	12	92	323 54	596 60	50 84	970 98	Private, rock.
Florence street	At Florence street	West Roxbury.	30					
Wyvern street	Malcolm street	West Roxbury.	96	362 15	157 72	19 17	539 04	Private, clay.
Arborview road	Washington and Forest Hills streets	West Roxbury.	313					
Rossmore road	From Washington street	West Roxbury.	396	998 66	488 25	22 00	1,508 91	Public, sandy.
Rossmore road	Commonwealth avenue and Gillard road.	Brighton.	627	1,956 79	978 63	55 00	2,990 42	Private, clay.
Seninary road	Bell Vista road	Brighton.	136	359 93	248 68	25 56	634 17	Private, clay.
Corey road	Commonwealth avenue and Ashford street.	Brighton.	703	1,760 75	503 80	20 13	2,284 68	Private, clay.
Alcorn street	From Lake street	Brighton.	848	2,270 37	875 52	79 88	3,225 77	Private, ash filled.
Lake Shore road	Faneuil street	Brighton.	490	1,426 02	609 36	95 60	2,130 98	Private, gravel.
Beecheroff street	Hillside and Sunnyside streets	Hyde Park.	506	1,456 99	692 20	77 88	2,227 07	Private, clay.
Church street	Sunnyside and Hyde Park streets	Hyde Park.	225	859 61	348 00	38 34	1,215 95	Private, clay and rock.
Roxana street	Hopewell and Friendship streets	Hyde Park.	338	969 99	342 00	43 13	1,355 12	Private, gravel.

Belvidere road.....	Oscocla and Hopewell streets.....	Hyde Park.....	12	637	2,045 67	935 01	139 61	3,140 29	Private, gravel.
Richmond road.....	Oakland street.....	Hyde Park.....	12	220	733 04	533 94	97 12	1,364 10	Private, rock and clay.
	Totals.....		12	17,042	\$49,606 87	\$22,339 68	\$1,978 50	\$73,945 05	
Southern Artery.....	Oakridge street.....	Dorchester.....	16	103	\$885 55	\$309 48	.....	\$1,195 06	Private, land.
Southern Artery.....	Washington and Oakridge streets.....	Dorchester.....	16	439	2,238 20	652 00	38 50	2,929 30	Public, clay.
Southern Artery.....	West from Oakridge street.....	Dorchester.....	16	72	257 16	180 00	7 91	445 07	Public, under construction.
East Border road.....	New Park avenue.....	West Roxbury.....	16	23	78 98	36 00	8 62	123 60	Public land, Metropolitan Commission.
West Roxbury Parkway, Across Centre street.....	West Roxbury Parkway.....	West Roxbury.....	16	348	2,496 62	916 60	36 42	3,449 73	Public, clay.
Centre street.....	Stratford and Belton streets.....	West Roxbury.....	16	20	5,590 01	1,967 63	239 67	7,797 91	Public land, Metropolitan Commission.
West Border road.....	Pelton street.....	West Roxbury.....	16	447	3,033 55	1,115 74	121 00	4,290 29	Public land, clay.
West Roxbury Parkway, East and West Border roads.....	Totals.....	West Roxbury.....	16	191	\$14,600 70	\$5,178 14	\$452 12	\$20,230 96	
Adams street.....	Southern Artery.....	Dorchester.....	20	184	\$987 06	\$377 20	\$20 37	\$1,384 63	Public, under construction.
	Totals.....		184	\$987 06	\$377 20	\$20 37	\$1,384 63		
Southern Artery.....	Dorchester Avenue and Adams street,	Dorchester.....	24	2,926	20,601 21	6,971 10	231 14	27,803 45	Public, under construction.
Pond street.....	Arborway.....	West Roxbury.....	24	73	503 34	.....	.....	503 34	Public, under construction.
Pond street.....	At Prince street.....	West Roxbury.....	24	60	1,720 81	\$91 63	95 85	2,708 29	Public gravel.
Prince street.....	At Pond street.....	West Roxbury.....	24	12	.....	.....	.....	.....
	Totals.....		24	3,071	\$22,825 36	\$7,862 73	\$326 99	\$31,015 08	
Columbus Avenue.....	Boylston and Arlington streets.....	Boylston and Arlington streets.....	.....	1,098	.....	.....	.....	.....
Charles street.....	Center entrance, Public Garden and Boylston street	City.....	48	520	\$170,365 02	\$76,497 46	\$5,497 09	\$252,355 47	Public, street.
Arlington street.....	Columbus and Cortez street.....		.....	657	.....	.....	.....	.....
	Totals.....		48	2,275	\$170,365 02	\$76,497 46	\$5,497 09	\$252,355 47	

Cost of Replacement of Main Pipe.

STREET,	Location,	District.	Cubic Feet. 12" x 12" x 12"	Cost of Department- Materials, etc.	Cost of Labor.	Cost of Inspec- tion.	Total Cost.	Original Size (inch.)	Remarks.
Wesley place,	From Hanover street,	City Proper,	2	126	\$248.80	\$144.90	\$16.29	\$409.99	1½
	Totals,								
Harold street,	At Hollander street,	Roxbury,	8	12	229.14	58.36	.....	287.50	8
Hollander street,	At Harold street,	Roxbury,	8	8					8
Glide street,	Between Oak avenue and Minot street,	Dorchester,	302	631.51	375.70	18.00	1,025.21	6	Public, gravel.
Blakeville street,	Between Bowdoin and Olney streets,	Dorchester,	8	83	97.17	83.00	4.79	184.96	6
Granville street,	At Southern Artery,	Dorchester,	8	19	83.43	19.50	3.20	106.13	6
Millwood street,	At Southern Artery,	Dorchester,	8	11	72.49	16.50	3.04	92.03	6
Frederika street,	From Southern Artery,	Dorchester,	8	13	68.05	19.50	3.04	90.59	6
Magdala street,	From Southern Artery,	Dorchester,	8	28	141.85	42.00	10.63	194.48	8
Becket street,	At Southern Artery,	Dorchester,	8	18	36.81	27.00	4.56	68.37	8
Glen road,	Between east and west lines of Siguorney street,	West Roxbury,	8	5	123.76	43.68	9.11	176.55	8
Hardwick street,	At Durland street,	Brighton,	8	63	82.32	68.13	3.20	153.65	6
Reddy avenue,	At River street,	Hyde Park,	8	5	24.60	6.75	3.20	34.55	6
Rosa street,	At River street,	Hyde Park,	8	6	33.71	8.10	3.20	45.01	6
LaFevre street,	From River street,	Hyde Park,	8	22	68.61	36.25	3.20	108.04	4
Child street,	At Cleveland street,	Hyde Park,	8	20	103.26	22.00	6.24	131.50	6
Charles street,	At Roxana street,	Hyde Park,	8	37	136.13	48.10	38.34	222.87	6

Arlington street	Between Providence street and Hyde Park avenue.....	Hyde Park, 8	419	884 61	749 38	61 46	1,665 45	4 Public, gravel.
	Totals.....	8	1,071	\$2,817 45	\$1,624 25	\$175 21	\$1,616 91	
Oakridge street	At Southern Artery	Dorchester, 10	6	127 74	66 66	.....	194 40	10 Public, under construction.
Verdun street	From Southern Artery	Dorchester, 10	16	44 06	24 00	4 79	72 85	10 Public, under construction.
Carruth street	At Southern Artery.....	Dorchester, 10	40	275 52	50 00	608	331 60	10 Public, under construction.
	Total.....	10	62	\$447 32	\$140 66	\$10 87	\$358 85	
West Newton street	Over railroad bridge.....	City Proper, 12	82	\$444 51	\$258 89	.....	\$763 40	12 Public.
Mason street	Between Avery and West streets	City Proper, 12	257	1,660 09	458 35	14 33	2,122 77	6 Public, asphalt.
Gironville place	Front Columbus avenue.....	City Proper, 12	140	435 41	221 23	14 30	670 94	6 Public, granite block and granite base.
Park square	Between Boylston and Elliot streets.	City Proper, 12	190	536 21	950 00	72 00	1,558 21	12 Public, granite block and concrete base.
Warren street	Between Tremont and Stuart streets.	City Proper, 12	508	1,332 25	1,053 09	91 05	2,476 39	6 Public, clay, gravel and asphalt.
199 D street	Between Bell Court and West Second street.	South Boston, 12	2,290	9,510 12	4,365 07	384 00	14,259 19	12 Public, clay.
Bolton street	Across D street	South Boston, 8	33	.....	.....	.....	.....	6 Public, clay.
Third street	Across D street	South Boston, 10	53	.....	.....	.....	.....	6 Public, clay.
Athens street	Across D street	South Boston, 8	55	.....	.....	.....	.....	6 Public, clay.
Silver street	Across D street	South Boston, 8	51	.....	.....	.....	.....	6 Public, clay.
Gold street	Across D street	South Boston, 8	54	.....	.....	.....	.....	6 Public, clay.
Fifth street	Across D street	South Boston, 10	50	.....	.....	.....	.....	6 Public, clay.
Tudor street	Across D street	South Boston, 8	51	.....	.....	.....	.....	6 Public, clay.
Seven street	Across D street	South Boston, 8	34	.....	.....	.....	.....	6 Public, clay.
Eight street	Across D street	South Boston, 8	54	.....	.....	.....	.....	6 Public, clay.
	<i>Carried forward.....</i>	.....	3,901	\$13,908 59	\$7,306 63	\$575 68	\$21,790 90	

Cost of Replacement of Main Pipe.—Concluded.

STREET.	Location.	District.	Length Feet.	Cost of Department Materials, etc.	Cost of Labor.	Cost of Inspection.	Total Cost.	Length Inches (In feet)	Remarks.
	<i>Brought forward.</i>		.....	3,901	\$13,908.59	\$7,306.63	\$575.68	\$21,790.90	.....
Southern Artery.....	South side, between Dorchester avenue and Adams street.	Dorchester.	12 502	\$1,996.00	\$1,213.97	\$79.42	\$3,280.39	12	Public, under construction.
Hubbard street.....	From Savin Hill avenue.	Dorchester.	12 171	686.27	627.24	51.59	1,365.10	12	Private, rock.
Winston road.....	From Willowwood street.	Dorchester.	12 178	673.20	393.20	46.75	1,113.15	6	Public, under construction.
Morton street.....	Between Evans and Fairmount streets.	Dorchester.	12 344	448.24	1,065.33	118.60	1,632.17	12	Public, rock, under construction.
Southern Artery.....	Between Adams street and Granite avenue.	Dorchester.	12 802	1,993.12	1,186.29	66.21	3,245.62	12	Public, under construction.
Morton street.....	Between Fuller and Fairmount streets.	Dorchester.	1 1/2 168	116.30	455.69	.....	571.99	12	Public, under construction.
Adams street.....	At No. 1109,.....	Dorchester.	12 16	206.27	94.41	16.50	317.18	12	Public, clay.
Granite avenue.....	At Adams street and Southern Artery.	Dorchester.	12 209	758.18	303.38	49.52	1,111.38	12	Public, under construction.
Walworth street.....	At Auburn street.	West Roxbury.	12 9	92.19	60.00	4.20	156.39	12	Private, clay.
Adams street.....	Between Everett and Franklin streets.	Brighton.	12 1,166	3,357.12	2,610.53	69.00	6,066.65	12	Public, sand and gravel.
Belind road.....	At Hopewell road.	Hyde Park.	12 22	22.39	52.00	12.14	86.53	12	Private, gravel.

Metropolitan avenue	Between River and Westminster streets.	Hyde Park	12	1,225	3,750 08	3,013 68	110 50	6,905 16	61 Public, rock and gravel.
Southern Avenue.....	Between Adams street and Granite avenue.	Dorchester.	12	802	1,993 12	1,186 29	66 21	3,245 62	12 Public, under construction.
Glenwood avenue.....	Between Beaver and Child streets.....	Hyde Park.	12	230	744 86	322 55	49 84	1,117 25	61 Public, clay.
Cleveland street.....	Between Child and Beaver streets.....	Hyde Park.	12	330	1,195 75	527 55	65 57	1,788 87	61 Public, gravel.
Roxana street.....	Between Sunnyside street and Hyde Park avenue.	Hyde Park.	12	182	453 48	229 49	30 35	713 32	61 Public, clay.
Sunnyside street.....	Between Franklin and Church streets.	Hyde Park.	12	938	2,578 82	1,341 10	46 17	3,966 09	4 Public, clay.
Thompson street.....	Between Glenwood avenue and Franklin street.	Hyde Park.	12	520	1,871 37	813 13	100 26	2,796 76	4 Public, clay.
Beaver street.....	Between Cleveland street and Glenwood avenue.	Hyde Park.	12	686	2,170 24	983 85	112 46	3,266 55	61 Public, gravel and sand.
Franklin street	Between Thompson street and Sunnyside street.	Hyde Park.	12	361	1,197 25	696 62	52 10	1,746 27	4 Public, clay.
	Totals.....		12	12,752	\$40,217 04	\$24,312 93	\$1,762 37	\$66,292 34	
Union street.....	Between Hanover street and Dock square.	City Proper.	24	750	\$6,112 88	\$2,124 10	\$165 92	\$6,032 90	24 Public, under construction.

Cost of Relocation of Main Pipe.

STREET.	Location.	District.	Feet. 12 in. 12 in.	Cost of Depart- ment Materials, etc.	Cost of Labor.	Cost of Inspection.	Total Cost.	Cost of Pipe. 12 in. 12 in.	Remarks.
Codman street.....	Between Nevada street and Milton avenue.	Dorchester.	8 178	\$44 50	\$167 33	\$40 21	\$232 04	8	Public, clay.
Steadman street.....	Between Williams street and Brook road.	West Roxbury.	8 220	437 22	318 13	9 11	764 46	8	Private, sand.
Colonial road.....	At Euston road.....	Brighton.	8 21	42 36	67 25	.....	109 61	8	Public, under construction.
Walter street.....	At River street.....	Hyde Park.	8 12	38 41	16 20	3 99	58 60	8	Private, gravel.
Rockdale street.....	Between Randolph road and Violante street.	Hyde Park.	8 330	117 75	647 69	36 42	801 86	8	Public, rock and clay.
	Totals.....		8 761	\$680 24	\$1,216 60	\$89 73	\$1,986 57		
Mather street.....	Between Allston and Nixon street over Dorchester Tunnel.	Dorchester.	10 76	\$285 53	\$114 75	.....	\$400 28	6	Public, gravel.
McIvile avenue.....	Between Wellsley park and Waldeck street.	Dorchester.	10 65	267 28	83 75	.....	351 03	8	Public, gravel.
	Totals.....		10 141	\$552 81	\$198 50	.....	\$751 31		
Dorchester avenue at power house.	Opposite Mt. Washington avenue.	City Proper.	12 49	\$212 70	\$100 00	\$6 39	\$319 09	12	Public, granite base.
Dock square.....	Between Exchange street and Merchants row.	City Proper.	12 398	1,568 37	1,013 07	114 84	2,696 28	12	Public, asphalt.
Corn court.....	In Dock square.....	City Proper.	6 34					4	Public, asphalt.

Southern Artery.....	Between Granite and Lenoxdale avenues.	Dorchester.	12	173	788 98	175 48	84 51	1,018 97	8	Public, under construction.
Hillsdale street.....	From Adams street.....	Dorchester.	12	94	113 78	110 07	.....	223 85	12	Public, macadam.
Southern Artery.....	Between Washington street and Dorchester avenue (old Codman street.)	Dorchester.	12	285	359 27	692 29	75 95	1,127 51	12	Public, under construction.
Codman street.....	Near Washington street.....	Dorchester.	12	13	117 37	87 46	.....	204 83	12	Public, under construction.
Alicia road.....	From Southern Artery.....	Dorchester.	12	200	17 85	331 77	12 78	362 40	12	Private, clay.
Centre street.....	Between Someset and Melbourne streets.	Dorchester.	12	86	365 24	122 25	.....	487 49	12	Public, gravel.
Southern Artery.....	Between Grayson street and Cushing Hill road.	Dorchester.	12	729	2,371 41	1,057 41	65 84	3,494 66	8	Public, gravel.
Park street.....	At Waldeck street.....	Dorchester.	12	109	437 23	140 75	.....	577 98	12	Public, gravel.
Pond street.....	Between Billings lane and Pond circle.	West Roxbury.	12	160	401 32	50 63	.....	451 95	12	Public, macadam.
Fairmount avenue.....	Over railroad bridge.....	Hyde Park.	12	191	183 89	353 38	.....	537 27	12	Public, macadam.
River street.....	Between Whittney park and Mather street.	Hyde Park.	12	318	1,624 88	1,622 61	93 85	3,341 34	12	Public, gravel.
Totals .....	.....	.....	12	3,074	\$8,562 29	\$5,857 17	\$454 16	\$14,873 62	20	Public, under construction.
Southern Artery.....	Between Washington street and Dorchester avenue.	Dorchester.	20	620	\$34 69	\$1,191 04	\$81 18	\$1,309 91	20	Public, under construction.

WATERWORKS STATISTICS.—CITY OF BOSTON.

FOR THE FISCAL YEAR ENDING DECEMBER 31, 1927.

DISTRIBUTION.

Mains.

Kind of pipe: cast iron, wrought iron.

Size: 2-inch to 48-inch.

Extended, miles, 10.91.

Size, enlarged, miles, 1.84.

Total miles now in use, 935.23.

Public hydrants added, 128.

Public hydrants now in use, 10,601.

Stops gates added, 240.

Stop gates now in use, 14,336.

Stop gates smaller than 4-inch, 33.

Number of blow-offs, 728

Range of pressure on mains, 30 to 90 pounds.

*Service.*Kind of pipe and size, lead and lead lined: $\frac{1}{2}$ -inch to 2-inch cast iron.2-inch to 12-inch, wrought iron and cement lined: $\frac{3}{4}$ -inch to 2-inch.

Extended feet, 45,911.

Total miles now in use, 628.51.

Service taps added, 1,920.

Total service taps now in use, 117,923.

High Pressure Fire System Extension, 1927.

Appropriations to December 31, 1927	..	..	..	\$2,128,000 00
Total expenditures to December 31, 1927	..	..	..	2,127,618 00
Balance unexpended December 31, 1927	..	..	..	<u><u>\$382 00</u></u>

APPENDIX G.

REPORT OF THE BOSTON AND CAMBRIDGE
BRIDGE COMMISSION.

To the Honorable the Mayor.

SIR — As Commissioner for the City of Boston, I respectfully submit herewith the annual report of the Boston and Cambridge Bridge Commission for the year ending December 31, 1927.

The commission is composed of two members, one appointed by the Mayor of the City of Boston and the other by the Mayor of the city of Cambridge, under provisions of chapter 467, Acts of 1898.

The commission has charge of the maintenance of the following-named bridges between Boston and Cambridge; Anderson, Longfellow Prison Point, River Street and Western Avenue to Cambridge. River Street Bridge and Western Avenue Bridge were returned to the control of the commission, after being rebuilt by the Metropolitan District Commission, on December 1, 1926.

As there is no separate appropriation made for the City of Boston's portion of the expenses of this commission, the same is taken from the appropriation for the Bridge and Ferry Division, Bridge Service. The amount expended during the fiscal year ending December 31, 1927, was \$16,496.35.

ANDERSON BRIDGE (OVER CHARLES RIVER.)

The paving on the existing bridge, which is of wood block on concrete base, has had a considerable amount of repairs made to it. It is only a question of time when this paving will have to be relaid.

LONGFELLOW BRIDGE (OVER CHARLES RIVER).

By chapter 33 of the Acts of 1927 the name of Cambridge Bridge was changed to Longfellow Bridge.

PRISON POINT BRIDGE.

The channelway under this bridge was blocked by the improvements being made by the Boston & Maine Railroad and no more boats will pass through the channelway. It is therefore advisable that the bridge be strengthened, a new flooring placed and a new type of surfacing laid so that the constant repairs and patching of this structure may be eliminated.

RIVER STREET BRIDGE.

This bridge, a three-arched reinforced concrete bridge, with concrete paving, is now in the hands of this commission. There are no car tracks on this structure.

WESTERN AVENUE BRIDGE (TO CAMBRIDGE.)

This bridge, a three-arched reinforced concrete bridge, with bituminous macadam paving, is now in the custody of this commission. This bridge has two street car tracks on it.

Respectfully submitted,

JAMES H. SULLIVAN,
Commissioner for the City of Boston.

Boston and Cambridge Bridges, Expenditures for the Year Ending December 31, 1927.
Being the Portion Paid by the City of Boston, Which is One Half of the Total Expenditure.

	Administration.	Anderson Bridge.	Cambridge Bridge.	Prison Point Bridge.	Cambridge Street-River Street Bridge.	Western Avenue Bridge.	Totals.
Salaries.....	\$250 00	\$850 00	\$3,094 67	\$2,854 88	.....	.....	\$7,049 55
Inspection.....	.....	110 00	186 00	234 00	\$34 00	\$42 00	606 00
Repairs.....	.....	655 60	2,674 11	2,134 54	21 21	.....	5,485 46
Lumber.....	.....	.....	.....	750 07	.....	.....	750 07
Light.....	.....	298 75	1,513 56	2 79	255 00	274 41	2,344 51
Fuel.....	.....	.....	.....	38 22	.....	.....	38 22
Supplies.....	.....	.....	89 22	24 00	.....	.....	113 22
Printing and stationery.....	14 07	.....	.....	.....	.....	.....	14 07
Telephone and traveling expenses.....	95 25	95 25
Totals.....	\$359 32	\$1,914 35	\$7,557 56	\$6,038 50	\$310 21	\$316 41	\$16,496 35

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